



CITY OF NEWARK CITY COUNCIL

37101 Newark Boulevard, Newark, CA 94560-3796 • 510-578-4266 • E-mail: city.clerk@newark.org

City Administration Building
7:30 p.m.
City Council Chambers

AGENDA

Thursday, January 26, 2017

- A. ROLL CALL**
- B. MINUTES**
 - B.1 Approval of Minutes of the regular City Council meeting of Thursday, January 12, 2017. (MOTION)**
- C. PRESENTATIONS AND PROCLAMATIONS**
- D. WRITTEN COMMUNICATIONS**
- E. PUBLIC HEARINGS**
- F. CITY MANAGER REPORT**
 - F.1 Presentation on Pension and Other Post-Employment Benefits – from Administrative Services Director Woodstock. (PRESENTATION)**
- G. CITY ATTORNEY REPORTS**
- H. ECONOMIC DEVELOPMENT CORPORATION**
- I. CITY COUNCIL MATTERS**
- J. CITY COUNCIL ACTING AS THE SUCCESSOR AGENCY TO THE REDEVELOPMENT AGENCY**

K. ORAL COMMUNICATIONS

L. APPROPRIATIONS

Approval of Audited Demands for the City Council meeting of January 26, 2017. (MOTION)

M. CLOSED SESSION

M.1 Closed session for conference with Legal Counsel pursuant to Government Code Section 54956.9(d)(2), Anticipated Litigation: One case – from Human Resources Director Abe and City Attorney Benoun.

N. ADJOURNMENT

Pursuant to Government Code 54957.5: Supplemental materials distributed less than 72 hours before this meeting, to a majority of the City Council, will be made available for public inspection at this meeting and at the City Clerk's Office located at 37101 Newark Boulevard, 5th Floor, during normal business hours. Materials prepared by City staff and distributed during the meeting are available for public inspection at the meeting or after the meeting if prepared by some other person. Documents related to closed session items or are exempt from disclosure will not be made available for public inspection.

For those persons requiring hearing assistance, please make your request to the City Clerk two days prior to the meeting.



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City Administration Building
7:30 p.m.
City Council Chambers

AGENDA

Thursday, January 26, 2017

CITY COUNCIL:

Alan L. Nagy, Mayor
Mike Bucci, Vice Mayor
Luis L. Freitas
Sucy Collazo
Michael K. Hannon

CITY STAFF:

John Becker
City Manager
Terrence Grindall
Assistant City Manager
Susie Woodstock
Administrative Services Director
Sandy Abe
Human Resources Director
Soren Fajeau
Public Works Director
Jim Leal
Police Chief
David Zehnder
Recreation and Community
Services Director
David J. Benoun
City Attorney
Sheila Harrington
City Clerk

Welcome to the Newark City Council meeting. The following information will help you understand the City Council Agenda and what occurs during a City Council meeting. Your participation in your City government is encouraged, and we hope this information will enable you to become more involved. The Order of Business for Council meetings is as follows:

- | | |
|-------------------------------------|-------------------------|
| A. ROLL CALL | I. COUNCIL MATTERS |
| B. MINUTES | J. SUCCESSOR AGENCY |
| C. PRESENTATIONS AND PROCLAMATIONS | TO REDEVELOPMENT AGENCY |
| D. WRITTEN COMMUNICATIONS | K. ORAL COMMUNICATIONS |
| E. PUBLIC HEARINGS | L. APPROPRIATIONS |
| F. CITY MANAGER REPORTS | M. CLOSED SESSION |
| G. CITY ATTORNEY REPORTS | N. ADJOURNMENT |
| H. ECONOMIC DEVELOPMENT CORPORATION | |

Items listed on the agenda may be approved, disapproved, or continued to a future meeting. Many items require an action by motion or the adoption of a resolution or an ordinance. When this is required, the words **MOTION**, **RESOLUTION**, or **ORDINANCE** appear in parenthesis at the end of the item. If one of these words does not appear, the item is an informational item.

The attached *Agenda* gives the *Background/Discussion* of agenda items. Following this section is the word *Attachment*. Unless "none" follows *Attachment*, there is more documentation which is available for public review at the Newark Library, the City Clerk's office or at www.newark.org. Those items on the Agenda which are coming from the Planning Commission will also include a section entitled *Update*, which will state what the Planning Commission's action was on that particular item. *Action* indicates what staff's recommendation is and what action(s) the Council may take.

Addressing the City Council: You may speak once and submit written materials on any listed item at the appropriate time. You may speak once and submit written materials on any item **not** on the agenda during **Oral Communications**. To address the Council, please seek the recognition of the Mayor by raising your hand. Once recognized, come forward to the lectern and you may, but you are not required to, state your name and address for the record. Public comments are limited to five (5) minutes per speaker, subject to adjustment by the Mayor. Matters brought before the Council which require an action may be either referred to staff or placed on a future Council agenda.

No question shall be asked of a council member, city staff, or an audience member except through the presiding officer. No person shall use vulgar, profane, loud or boisterous language that interrupts a meeting. Any person who refuses to carry out instructions given by the presiding officer for the purpose of maintaining order may be guilty of an infraction and may result in removal from the meeting.



CITY OF NEWARK CITY COUNCIL

37101 Newark Boulevard, Newark, CA 94560-3796 • 510-578-4266 • E-mail: city.clerk@newark.org

City Administration Building
7:30 p.m.
City Council Chambers

Minutes

Thursday, January 12, 2017

A. ROLL CALL

Mayor Nagy called the meeting to order at 7:33 p.m. Present were Council Members Hannon, Collazo, Freitas, and Vice Mayor Bucci.

B. MINUTES

B.1 Approval of Minutes of the regular and special City Council meetings of December 8 and 13, 2016. **MOTION APPROVED**

Council Member Bucci moved, Council Member Collazo seconded, to approve the Minutes of the regular City Council meeting. The motion passed, 4 AYES, 1 ABSTENTION (Hannon).

C. PRESENTATIONS AND PROCLAMATIONS

D. WRITTEN COMMUNICATIONS

E. PUBLIC HEARINGS

E.1 Hearing to Consider Adoption of an Urgency Ordinance and Introduction of a Zoning Text Amendment Ordinance Amending Newark Municipal Code Chapters 17.08 ("Definitions") and 17.16 ("R Residential Districts") to Comply with Recent Amendments to State Law Regarding Accessory Dwelling Units. **URGENCY ORDINANCE NO. 496U**

Assistant City Manager Grindall gave a presentation on the proposed amendment to Title 17 (Planning and Zoning) of the Newark Municipal Code to conform to State regulations for Accessory Dwelling Units (ADU). The new rules are intended to make it easier to create ADUs on single-family residential properties and address the shortage of affordable rental units.

Council Member Hannon suggested presenting these types of units to developers to consider including in their new developments, if the lot size would allow.

Vice Mayor Bucci suggested amending the ordinance to remove the owner occupied requirement. Council Member Hannon suggested that the City Council consider making a conditional use permit a requirement for the non-owner occupancy so the neighbors would be notified and could provide feedback.

Council Member Collazo suggested making it two bedrooms instead of one bedroom.

Mayor Nagy opened the public hearing at 7:41 p.m.

Angela Akridge requested clarification on the contiguous passageway language and how the owner occupancy would be enforced.

Mayor Nagy closed the public hearing at 8:01 p.m.

In response to City Council comments, City Manager Becker suggested removing the owner occupied provision from the urgency ordinance and returning at a future meeting with proposed language for the issues that were raised at the meeting. The City Council concurred with this suggestion.

Council Member Hannon requested that staff contact other cities and review their conditional requirements for secondary units relative to numbers of bedrooms and size of units.

Council Member Hannon moved, Vice Mayor Bucci seconded to adopt an Urgency Ordinance striking out Section 3, Paragraph (5)(A) “An ADU may be occupied as a separate single-family dwelling only if the legal owner of the lot occupies one of the dwellings located on the lot; otherwise, the ADU and the principal residence shall be occupied as if they were one single-family dwelling.” and replace it with “intentionally left blank” amending Newark Municipal Code Chapters 17.08 (“Definitions”) and 17.16 (“R Residential Districts”) to comply with recent amendments to State law regarding Accessory Dwelling Units. The motion passed, 4 AYES, 1 ABSTENTION (Freitas).

F. CITY MANAGER REPORTS

Council Member Collazo moved, Vice Mayor Bucci seconded, to approve Consent Calendar Item F.1 and that reading of the title suffice for adoption of the resolution. The motion passed, 5 AYES.

CONSENT

- F.1 Acceptance of work with Bond Blacktop, Inc. for 2016 Street Slurry Seal Program, Project 1117. RESOLUTION NO. 10586**

G. CITY ATTORNEY REPORTS

H. ECONOMIC DEVELOPMENT CORPORATION

I. CITY COUNCIL MATTERS

The entire City Council extended their condolences to the family of retired Assistant City Manager Dennis Jones.

Council Member Collazo stated that the drought is officially over.

Council Member Hannon requested that the City Council adjourn the meeting in memory of Dennis Jones.

J. CITY COUNCIL ACTING AS THE SUCCESSOR AGENCY TO THE REDEVELOPMENT AGENCY

- J.1 Resolution of the City of Newark acting as the Successor Agency to the Newark Redevelopment Agency adopting and endorsing the Recognized Obligation Payment Schedule for the period of July 2017 to June 2018 (ROPS 17-18) and approving the Last and Final ROPS.**

RESOLUTION NO. SA 2017-1

Administrative Services Director Woodstock stated that the outstanding debt on the loan from the City to the Newark Redevelopment Agency is \$215,696. The Agency can request \$62,894 in Fiscal Year 2017-2018 for repayment. The Last and Final ROPS allows the Agency to list the estimated requested amounts for future years until fully paid.

Council Member Collazo moved, Council Member Freitas seconded to by resolution, adopt and endorse the Recognized Obligation Payment Schedule for the period of July 2017 to June 2018 (ROPS 17-18) and approve the Last and Final Recognized Obligation Payment Schedule. The motion passed, 5 AYES.

K. ORAL COMMUNICATIONS

Ricardo Corte presented a letter to the City Council (on file with City Clerk). He requested a peer review of the Group 4 Architecture historical assessment of the Library and the addition of the library to the City's historical resource list.

Chris Moylan introduced himself as Congressman Ro Khanna's district office director. He requested that his office be informed of events within Newark.

Angela Akridge stated that the Newark Library League membership letter discusses the architecture of the library. She suggested providing informational flyers for the assessor dwelling unit.

L. APPROPRIATIONS

Approval of Audited Demands for the City Council meeting of January 12, 2017. MOTION APPROVED

City Clerk Harrington read the Register of Audited Demands: Check numbers 109656 to 109878.

Council Member Freitas moved, Council Member Hannon seconded, to approve the Register of Audited Demands. The motion passed, 5 AYES.

M. CLOSED SESSION

M.1 Closed session pursuant to Government Code Section 54957 Public Employee Performance Evaluation Title: City Manager.

At 8:38 p.m. the City Council recessed to a closed session.

At 8:45 p.m. the City Council convened in closed session.

At 10:10 p.m. the City Council reconvened in open session with all Council Members present.

N. ADJOURNMENT

At 10:10 p.m. Mayor Nagy adjourned the City Council meeting in memory of retired Assistant City Manager Dennis Jones.

F.1 Presentation on Pension and Other Post-Employment Benefits – from Administrative Services Director Woodstock. (PRESENTATION)

Background/Discussion – The California Public Employees’ Retirement System (CalPERS) continues to experience less than projected investment returns and take actions that affect the rates the City pays into the system. Each year CalPERS provides the City with Actuarial Valuations that calculate the rates, the liabilities and the assets for the City’s plans. This presentation at the City Council meeting will review the valuations and how the actions taken by the CalPERS Board impact the City.

Attachments

Action – Presentation only.

ATTACHMENT 1
Safety Plan Valuation Report



California Public Employees' Retirement System
 Actuarial Office
 P.O. Box 942709
 Sacramento, CA 94229-2709
 TTY: (916) 795-3240
 (888) 225-7377 phone – (916) 795-2744 fax
 www.calpers.ca.gov

August 2016

**SAFETY PLAN OF THE CITY OF NEWARK
 (CalPERS ID: 2387354187)
 Annual Valuation Report as of June 30, 2015**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2015 actuarial valuation report of the pension plan.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2015.

Section 2 can be found on the CalPERS website at (www.calpers.ca.gov). From the home page, go to "Forms & Publications" and select "View All". In the search box, enter "Risk Pool Report" and from the results list download the Miscellaneous or Safety Risk Pool Actuarial Valuation Report as appropriate.

Your June 30, 2015 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you after August 31, 2016.

Future Employer Contribution

Fiscal Year	Employer Normal Cost Rate	+	Employer Payment of Unfunded Liability
2017-18	19.723%		\$3,046,343
2018-19 (projected)	19.7%		\$3,620,380

The exhibit above displays the minimum employer contributions, before any cost sharing, for Fiscal Year 2017-18 along with estimates of the contributions for Fiscal Year 2018-19. The total employer contribution is the sum of a Normal Cost Rate applied to reported payroll plus an Unfunded Liability dollar payment. The estimated contributions for Fiscal Year 2018-19 are based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on the year to date return through April 30, 2016).

For a projection of employer contributions beyond Fiscal Year 2018-19, please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This 5-year projection of future employer contributions supersedes any previous projections we have provided. The "Risk Analysis" section of the valuation report also contains estimated employer contributions in future years under a variety of investment return scenarios. Member contributions, other than cost sharing, are in addition to the above amounts. The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees.

The estimates for Fiscal Year 2018-19 also assume that there are no future contract amendments and no liability gains or losses (such as larger than expected pay increases, more retirements than expected, etc.) This is an important assumption because these gains and losses do occur and can have a significant effect on required contributions. Even for the largest plans or pools, such gains and losses can impact the employer's contributions. These gains and losses cannot be predicted in advance so the projected employer contributions are estimates. The actual required employer contribution for Fiscal Year 2018-19 will be provided in next year's valuation report.

Changes since the Prior Year's Valuation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The policy has no impact on the current year valuation results but is expected to have an impact in future years. More details on the Risk Mitigation Policy can be found on our website.

Besides the above noted changes, there may also be changes specific to the plan such as contract amendments and funding changes.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A, "Statement of Actuarial Data, Methods and Assumptions" of the Section 2 report. We understand that you might have a number of questions about these results. While we are very interested in discussing these results with your agency, in the interest of allowing us to give every public agency their results, we ask that you wait until after August 31 to contact us with actuarial related questions.

If you have other questions, please call our customer contact center at (888) CalPERS or (888-**225-7377**).

Sincerely,



ALAN MILLIGAN
Chief Actuary



ACTUARIAL VALUATION
as of June 30, 2015

**for the
SAFETY PLAN
of the
CITY OF NEWARK**
(CalPERS ID: 2387354187)

**REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR
July 1, 2017 - June 30, 2018**

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SECTION 2 – RISK POOL ACTUARIAL VALUATION INFORMATION

Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

**Plan Specific Information
for the
SAFETY PLAN
of the
CITY OF NEWARK**

**(CalPERS ID: 2387354187)
(Rate Plan: 5280)**

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ACTUARIAL CERTIFICATION

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2015 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2015 provided by employers participating in the Safety Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuary has certified that, in their opinion, the valuation of the risk pool containing your SAFETY PLAN has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that the side fund and other Unfunded Accrued Liability bases as of June 30, 2015 and employer contribution as of July 1, 2017, have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary for CalPERS, who is a member of both the American Academy of Actuaries and Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



FRITZIE ARCHULETA, ASA, MAAA
Senior Pension Actuary, CalPERS
Plan Actuary

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 1**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **CHANGES SINCE THE PRIOR YEAR VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This report presents the results of the June 30, 2015 actuarial valuation of the SAFETY PLAN of the CITY OF NEWARK of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for Fiscal Year 2017-18.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The Risk Mitigation Policy does not have an impact on the current year actuarial valuation. More details on the Risk Mitigation Policy can be found on our website.

Purpose of Section 1

This Section 1 report for the SAFETY PLAN of the CITY OF NEWARK of the California Public Employees' Retirement System (CalPERS) was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2015;
- Determine the required employer contribution for this plan for the fiscal year July 1, 2017 through June 30, 2018; and
- Provide actuarial information as of June 30, 2015 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to GASB Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

The use of this report for any other purposes may be inappropriate. In particular, this report does not contain information applicable to alternative benefit costs. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

California Actuarial Advisory Panel Recommendations

This report includes all the basic disclosure elements as described in the *Model Disclosure Elements for Actuarial Valuation Reports* recommended in 2011 by the California Actuarial Advisory Panel (CAAP), with the exception of including the original base amounts of the various components of the unfunded liability in the Schedule of Amortization Bases shown on page 8.

Additionally, this report includes the following "Enhanced Risk Disclosures" also recommended by the CAAP in the Model Disclosure Elements document:

- A "Deterministic Stress Test," projecting future results under different investment income scenarios
- A "Sensitivity Analysis," showing the impact on current valuation results using a 1 percent plus or minus change in the discount rate.

Required Employer Contribution

Required Employer Contribution	Fiscal Year 2016-17 ¹	Fiscal Year 2017-18
Employer Normal Cost Rate	19.536%	19.723%
<i>Plus Either</i>		
1) Monthly Employer Dollar UAL Payment	\$ 218,920.66	\$ 253,861.91
<i>Or</i>		
2) Annual Lump Sum Prepayment Option	\$ 2,533,750	\$ 2,938,154
<p><i>The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars). Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change. § 20572 of the Public Employees' Retirement Law assesses interest at an annual rate of 10 percent if a contracting agency fails to remit the required contributions when due.</i></p>		

Development of Normal Cost as a Percentage of Payroll	Fiscal Year 2016-17 ¹	Fiscal Year 2017-18
Base Total Normal Cost for Formula	27.415%	27.603%
Surcharge for Class 1 Benefits ³		
a) FAC 1	1.108%	1.108%
Phase out of Normal Cost Difference ⁴	0.000%	0.000%
Plan's Total Normal Cost	28.523%	28.711%
Formula's Expected Employee Contribution Rate	8.987%	8.988%
Employer Normal Cost Rate	19.536%	19.723%
 Projected Payroll for the Contribution Fiscal Year	 \$ 7,628,620	 \$ 7,491,967
 Estimated Employer Contributions Based on Projected Payroll		
Plan's Estimated Employer Normal Cost	\$ 1,490,296	\$ 1,477,641
Plan's Payment on Amortization Bases ²	2,627,048	3,046,343
Total Employer Contribution ⁵	\$ 4,117,344	\$ 4,523,984

¹ The results shown for Fiscal Year 2016-17 reflect the prior year valuation and do not take into account any lump sum payment, side fund payoff, or rate adjustment made after June 30, 2015.

² See page 8 for a breakdown of the Amortization Bases.

³ Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

⁴ The normal cost difference is phased out over a five year period. The phase out of normal cost difference is 100 percent for the first year of pooling, and is incrementally reduced by 20 percent of the original normal cost difference for each subsequent year. This is non-zero only for plans that joined a pool within the past 5 years. Most plans joined a pool June 30, 2003, when risk pooling was implemented.

⁵ As a percentage of projected payroll the UAL contribution is 40.661 percent for an estimated total employer contribution rate of 60.384 percent.

Plan's Funded Status

		June 30, 2014		June 30, 2015
1. Present Value of Projected Benefits (PVB)	\$	172,788,777	\$	176,257,201
2. Entry Age Normal Accrued Liability (AL)		153,911,818		157,964,702
3. Plan's Market Value of Assets (MVA)		112,945,682		109,528,694
4. Unfunded Accrued Liability (UAL) [(2) - (3)]		40,966,136		48,436,008
5. Funded Ratio [(3) / (2)]		73.4%		69.3%

Projected Employer Contributions

The estimate for Fiscal Year 2018-19 is based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on year to date return through April 30, 2016).

The table below shows projected employer contributions (before cost sharing) for the next five fiscal years, **assuming CalPERS earns 0.0 percent for Fiscal Year 2015-16 and 7.50 percent every fiscal year thereafter**, and assuming that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the projection period.

Fiscal Year	Required Contribution	Projected Future Employer Contributions				
		2017-18	2018-19	2019-20	2020-21	2021-22
Normal Cost %	19.723%	19.7%	19.7%	19.7%	19.7%	19.7%
UAL \$	\$3,046,343	\$3,620,380	\$4,226,118	\$4,602,184	\$4,993,637	\$5,291,956

Changes since the Prior Year's Valuation

Benefits

None. This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of Section 2 for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

None.

Subsequent Events

Risk Mitigation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. More details on the Risk Mitigation Policy can be found on our website.

ASSETS AND LIABILITIES

- **ALLOCATION OF PLAN'S SHARE OF POOL'S EXPERIENCE/ASSUMPTION CHANGE**
- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S MVA**
- **SCHEDULE OF PLAN'S SIDE FUND & OTHER AMORTIZATION BASES**
- **30-YEAR AMORTIZATION SCHEDULE AND ALTERNATIVES**
- **EMPLOYER CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	\$	157,964,702
2.	Projected UAL balance at 6/30/15		42,466,635
3.	Pool's Accrued Liability	\$	18,467,886,519
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/15		3,713,009,355
5.	Pool's 2014/15 Investment & Asset (Gain)/Loss		765,720,345
6.	Pool's 2014/15 Other (Gain)/Loss		(2,867,161)
7.	Plan's Share of Pool's Asset (Gain)/Loss $[(1)-(2)]/[(3)-(4)] * (5)$		5,993,897
8.	Plan's Share of Pool's Other (Gain)/Loss $[(1)]/[(3)] * (6)$		(24,524)
9.	Plan's New (Gain)/Loss as of 6/30/2015 $[(7)+(8)]$	\$	5,969,373
10.	Increase in Pool's Accrued Liability due to Change in Assumptions		0
11.	Plan's Share of Pool's Change in Assumptions $[(1)]/[(3)] * (10)$	\$	0

Development of the Plan's Share of Pool's Market Value of Assets

1.	Plan's Accrued Liability	\$	157,964,702
2.	Plan's UAL	\$	48,436,008
3.	Plan's Share of Pool's MVA $[(1)-(2)]$	\$	109,528,694

Schedule of Plan's Side Fund and Other Amortization Bases

There is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2015.
- The employer contribution determined by the valuation is for the fiscal year beginning two years after the valuation date: Fiscal Year 2017-18.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the payment on the UAL for the fiscal year and adjusting for interest.

Reason for Base	Date Established	Amortization Period	Balance 6/30/15	Payment 2015-16	Balance 6/30/16	Payment 2016-17	Amounts for Fiscal 2017-18	
							Balance 6/30/17	Scheduled Payment for 2017-18
SIDE FUND	2013 or Prior	19	\$12,658,697	\$927,094	\$12,646,868	\$954,907	\$12,605,314	\$983,554
SHARE OF PRE-2013 POOL UAL	06/30/13	20	\$16,397,137	\$1,167,299	\$16,416,641	\$1,202,318	\$16,401,299	\$1,238,387
ASSET (GAIN)/LOSS	06/30/13	28	\$16,318,084	\$229,514	\$17,303,975	\$472,800	\$18,111,564	\$730,476
NON-ASSET (GAIN)/LOSS	06/30/13	28	\$(203,190)	\$(2,858)	\$(215,466)	\$(5,887)	\$(225,522)	\$(9,096)
ASSET (GAIN)/LOSS	06/30/14	29	\$(10,759,138)	\$0	\$(11,566,073)	\$(162,677)	\$(12,264,861)	\$(335,115)
ASSUMPTION CHANGE	06/30/14	19	\$7,908,094	\$(72,802)	\$8,576,684	\$163,366	\$9,050,554	\$336,534
NON-ASSET (GAIN)/LOSS	06/30/14	29	\$146,951	\$0	\$157,972	\$2,222	\$167,516	\$4,577
ASSET (GAIN)/LOSS	06/30/15	30	\$5,993,897	\$0	\$6,443,440	\$0	\$6,926,698	\$97,424
NON-ASSET (GAIN)/LOSS	06/30/15	30	\$(24,524)	\$0	\$(26,364)	\$0	\$(28,341)	\$(399)
TOTAL			\$48,436,008	\$2,248,247	\$49,737,677	\$2,627,049	\$50,744,221	\$3,046,342

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed on the previous page. These (gain)/loss bases will be amortized according to Board policy over 30 years with a 5-year ramp-up.

If the total Unfunded Liability is negative (i.e., plan has a surplus), the scheduled payment is \$0, because the minimum required contribution under PEPRA must be at least equal to the normal cost.

30-Year Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to CalPERS amortization policy. There has been considerable interest from many agencies in paying off these unfunded accrued liabilities sooner and the possible savings in doing so. As a result, we have provided alternate amortization schedules to help analyze the current amortization schedule and illustrate the advantages of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternate "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. Note that the payments under each alternate scenario increase by 3 percent for each year into the future. The schedules do not attempt to reflect any experience after June 30, 2015 that may deviate from the actuarial assumptions. Therefore, future amortization payments displayed in the Current Amortization Schedule may not match projected amortization payments shown in connection with Projected Employer Contributions provided elsewhere in this report.

The Current Amortization Schedule typically contains individual bases that are both positive and negative. Positive bases result from plan changes, assumption changes or plan experience that result in increases to unfunded liability. Negative bases result from plan changes, assumption changes or plan experience that result in decreases to unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years such as:

- A positive total unfunded liability with a negative total payment,
- A negative total unfunded liability with a positive total payment, or
- Total payments that completely amortize the unfunded liability over a very short period of time

In any year where one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy. For purposes of this display, total payments include any negative payments. Therefore, the amount of estimated savings may be understated to the extent that negative payments appear in the current schedule.

30-Year Amortization Schedule and Alternatives

Date	<u>Current Amortization Schedule</u>		<u>Alternate Schedules</u>			
	Balance	Payment	20 Year Amortization		15 Year Amortization	
			Balance	Payment	Balance	Payment
6/30/2017	50,744,220	3,046,343	50,744,220	3,831,464	50,744,220	4,651,699
6/30/2018	51,391,521	3,488,431	50,577,490	3,946,408	49,727,053	4,791,250
6/30/2019	51,629,003	3,954,303	50,279,079	4,064,800	48,488,908	4,934,988
6/30/2020	51,401,270	4,182,231	49,835,536	4,186,744	47,008,872	5,083,037
6/30/2021	50,920,136	4,416,901	49,232,292	4,312,347	45,264,332	5,235,528
6/30/2022	50,159,606	4,549,408	48,453,578	4,441,717	43,230,846	5,392,594
6/30/2023	49,204,650	4,685,890	47,482,326	4,574,968	40,881,998	5,554,372
6/30/2024	48,036,564	4,826,467	46,300,072	4,712,218	38,189,253	5,721,003
6/30/2025	46,635,119	4,971,261	44,886,846	4,853,584	35,121,785	5,892,633
6/30/2026	44,978,440	5,120,399	43,221,057	4,999,192	31,646,306	6,069,412
6/30/2027	43,042,881	5,274,011	41,279,364	5,149,167	27,726,879	6,251,495
6/30/2028	40,802,887	5,432,231	39,036,546	5,303,642	23,324,707	6,439,039
6/30/2029	38,230,846	5,595,198	36,465,354	5,462,752	18,397,922	6,632,211
6/30/2030	35,296,935	5,763,054	33,536,354	5,626,634	12,901,344	6,831,177
6/30/2031	31,968,944	5,935,945	30,217,762	5,795,433	6,786,229	7,036,112
6/30/2032	28,212,096	5,851,869	26,475,261	5,969,296		
6/30/2033	24,260,656	5,757,406	22,271,807	6,148,375		
6/30/2034	20,110,799	5,652,009	17,567,422	6,332,826		
6/30/2035	15,758,981	5,535,106	12,318,965	6,522,811		
6/30/2036	11,201,985	3,681,433	6,479,892	6,718,495		
6/30/2037	8,225,143	1,555,211				
6/30/2038	7,229,551	1,601,868				
6/30/2039	6,110,916	1,649,924				
6/30/2040	4,858,558	1,699,421				
6/30/2041	3,460,952	1,261,598				
6/30/2042	2,412,470	1,142,013				
6/30/2043	1,409,341	804,873				
6/30/2044	680,531	446,476				
6/30/2045	268,654	65,852				
6/30/2046	220,527	228,647				
Totals		108,175,778		102,952,874		86,516,551
Estimated Savings				5,222,904		21,659,227

Current CalPERS Board policy prioritizes the order for which lump sum contributions in excess of the required employer contribution shall be applied. Excess contributions shall first be applied toward payment on the plan's side fund, and any remainder shall then be applied toward the plan's share of the pool's unfunded accrued liability.

Please contact the plan actuary before making such a payment to ensure that the payment is applied correctly.

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made during a fiscal year.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment (\$)
2016 - 17	19.536%	2,627,048
2017 - 18	19.723%	3,046,343

Funding History

The funding history below shows the plan's actuarial accrued liability, share of the pool's market value of assets, share of the pool's unfunded liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Plan's Share of Pool's Unfunded Liability	Funded Ratio	Annual Covered Payroll
06/30/2011	\$ 132,560,743	\$ 94,802,047	\$ 37,758,696	71.5%	\$ 6,448,714
06/30/2012	138,069,680	92,567,098	45,502,582	67.0%	6,629,502
06/30/2013	142,743,987	100,904,589	41,839,398	70.7%	6,433,928
06/30/2014	153,911,818	112,945,682	40,966,136	73.4%	6,981,268
06/30/2015	157,964,702	109,528,694	48,436,008	69.3%	6,856,211

RISK ANALYSIS

- **ANALYSIS OF FUTURE INVESTMENT RETURN SCENARIOS**
- **ANALYSIS OF DISCOUNT RATE SENSITIVITY**
- **VOLATILITY RATIOS**
- **HYPOTHETICAL TERMINATION LIABILITY**

Analysis of Future Investment Return Scenarios

The investment return for Fiscal Year 2015-16 was not known at the time this report was produced. The investment return in Fiscal Year 2015-16 as of April 30, 2016 is 0.0 percent before administrative expenses. For purposes of projecting future employer contributions, we are assuming a 0.0 percent investment return for Fiscal Year 2015-16.

The investment return realized during a fiscal year first affects the contribution for the fiscal year two years later. For example, the investment return for Fiscal Year 2015-16 will first be reflected in the June 30, 2016 actuarial valuation that will be used to set the Fiscal Year 2018-19 employer contributions, the Fiscal Year 2016-17 investment return will first be reflected in the June 30, 2017 actuarial valuation that will be used to set the Fiscal Year 2019-20 employer contributions, and so forth.

A sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2016-17, 2017-18, and 2018-19 on the employer contributions for fiscal years 2019-20, 2020-21, and 2021-22. The projected contributions assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

Five different investment return scenarios were selected.

- The first scenario is a -3.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 5th percentile return from July 1, 2016 through June 30, 2019.
- The second scenario is a 2.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 25th percentile return from July 1, 2016 through June 30, 2019.
- The third scenario is a 7.5 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 49th percentile return from July 1, 2016 through June 30, 2019.
- The fourth scenario is a 12.0 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 75th percentile return from July 1, 2016 through June 30, 2019.
- Finally, the last scenario is an 18.9 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 95th percentile return from July 1, 2016 through June 30, 2019.

The table below shows the estimated projected contributions and the estimated increases for the plan under the five different scenarios.

2016-19 Investment Return Scenario	Fiscal Year			Estimated Change Between 2018-19 and 2021-22
	2019-20	2020-21	2021-22	
(3.8%)				
Normal Cost	19.7%	19.7%	19.7%	0.0%
UAL Contribution	\$4,421,043	\$5,187,717	\$6,166,995	\$2,546,615
2.8%				
Normal Cost	19.7%	19.7%	19.7%	0.0%
UAL Contribution	\$4,307,205	\$4,851,111	\$5,503,314	\$1,882,934
7.5%				
Normal Cost	19.7%	19.7%	19.7%	0.0%
UAL Contribution	\$4,226,118	\$4,602,184	\$4,993,637	\$1,373,257
12.0%				
Normal Cost	20.1%	20.5%	20.8%	1.1%
UAL Contribution	\$4,145,610	\$4,367,532	\$4,517,791	\$897,411
18.9%				
Normal Cost	20.8%	21.9%	23.1%	3.4%
UAL Contribution	\$4,022,701	\$4,011,057	\$3,786,877	\$166,497

For the last two scenarios in the table above the results incorporate the impact of CalPERS Risk Mitigation Policy. A 12.0% return would result in a reduction of the discount rate by 0.05% and a return of 18.9% would reduce the discount rate by 0.15%. Reducing the discount rate increases both the plan's accrued liability and normal cost. More details about Risk Mitigation policy can be found on our website.

Analysis of Discount Rate Sensitivity

The following analysis looks at the Fiscal Year 2017-18 total normal cost rates and liabilities under two different discount rate scenarios. Shown below are the total normal cost rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis shows the potential plan impacts if the Public Employees' Retirement Fund (PERF) were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This analysis is intended to illustrate the long-term risk to the contribution rates.

Sensitivity Analysis			
As of June 30, 2015	6.50% Discount Rate (-1%)	7.50% Discount Rate (assumed rate)	8.50% Discount Rate (+1%)
Plan's Total Normal Cost	36.1%	28.7%	23.1%
Accrued Liability	\$179,250,880	\$157,964,702	\$140,494,296
Unfunded Accrued Liability	\$69,722,186	\$48,436,008	\$30,965,602

Volatility Ratios

Actuarial calculations are based on a number of assumptions about long-term demographic and economic behavior. Unless these assumptions (terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility, than a plan with an asset-to-payroll ratio of 4. Shown below is the asset volatility ratio, a measure of the plan's current contribution volatility. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Plans that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with a liability-to-payroll ratio of 8 is expected to have twice the contribution volatility of a plan with a liability-to-payroll ratio of 4. The liability volatility ratio is also shown in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The asset volatility ratio, described above, will tend to move closer to the liability volatility ratio as the plan matures.

Rate Volatility	As of June 30, 2015	
1. Market Value of Assets	\$	109,528,694
2. Payroll		6,856,211
3. Asset Volatility Ratio (AVR) [(1) / (2)]		16.0
4. Accrued Liability	\$	157,964,702
5. Liability Volatility Ratio (LVR) [(4) / (2)]		23.0

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2015. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while funding risk is limited. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 2-year period centered around the valuation date.

Market Value of Assets (MVA)	Hypothetical Termination Liability^{1,2} @ 2.00%	Funded Status	Unfunded Termination Liability @ 2.00%	Hypothetical Termination Liability^{1,2} @ 3.25%	Funded Status	Unfunded Termination Liability @ 3.25%
\$109,528,694	\$329,580,849	33.2%	\$220,052,155	\$274,396,316	39.9%	\$164,867,622

¹ The hypothetical liabilities calculated above include a 7 percent mortality contingency load in accordance with Board policy. Other actuarial assumptions, such as wage and inflation assumptions, can be found in Appendix A.

² The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 2.75 percent on June 30, 2015.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2014	June 30, 2015
Reported Payroll	\$ 6,981,268	\$ 6,856,211
Projected Payroll for Contribution Purposes	\$ 7,628,620	\$ 7,491,967
Number of Members		
Active	55	53
Transferred	71	66
Separated	18	18
Retired	134	140

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- One Year Final Compensation (FAC 1)

PLAN'S MAJOR BENEFIT OPTIONS

SECTION 1 – PLAN SPECIFIC INFORMATION FOR THE SAFETY PLAN OF THE CITY OF NEWARK

Plan’s Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Appendix B within Section 2 of this report.

Benefit Provision	Contract package			
	Active Police	Inactive Fire	Receiving Fire	Receiving Police
Benefit Formula	3.0% @ 50	3.0% @ 50		
Social Security Coverage	No	No		
Full/Modified	Full	Full		
Employee Contribution Rate	9.00%			
Final Average Compensation Period	One Year	One Year		
Sick Leave Credit	Yes	Yes		
Non-Industrial Disability	Standard	Standard		
Industrial Disability	Yes	Yes		
Pre-Retirement Death Benefits				
Optional Settlement 2W	Yes	Yes		
1959 Survivor Benefit Level	Indexed	Indexed		
Special	Yes	Yes		
Alternate (firefighters)	No	No	No	No
Post-Retirement Death Benefits				
Lump Sum	\$500	\$500	\$500	\$500
Survivor Allowance (PRSA)	No	No	No	No
COLA	2%	2%	2%	2%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

**Section 2 may be found on the CalPERS website
(www.calpers.ca.gov) in the Forms and
Publications section**

ATTACHMENT 1

PEPRA Safety Police Plan Valuation Report



California Public Employees' Retirement System
 Actuarial Office
 P.O. Box 942709
 Sacramento, CA 94229-2709
 TTY: (916) 795-3240
 (888) 225-7377 phone – (916) 795-2744 fax
 www.calpers.ca.gov

August 2016

**PEPRA SAFETY POLICE PLAN OF THE CITY OF NEWARK
 (CalPERS ID: 2387354187)
 Annual Valuation Report as of June 30, 2015**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2015 actuarial valuation report of the pension plan.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2015.

Section 2 can be found on the CalPERS website at (www.calpers.ca.gov). From the home page, go to "Forms & Publications" and select "View All". In the search box, enter "Risk Pool Report" and from the results list download the Miscellaneous or Safety Risk Pool Actuarial Valuation Report as appropriate.

Your June 30, 2015 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you after August 31, 2016.

Future Employer Contribution

Fiscal Year	Employer Normal Cost Rate	+	Employer Payment of Unfunded Liability
2017-18	11.990%		\$2,001
2018-19 (projected)	12.0%		\$2,168

The exhibit above displays the minimum employer contributions, before any cost sharing, for Fiscal Year 2017-18 along with estimates of the contributions for Fiscal Year 2018-19. The total employer contribution is the sum of a Normal Cost Rate applied to reported payroll plus an Unfunded Liability dollar payment. The estimated contributions for Fiscal Year 2018-19 are based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on the year to date return through April 30, 2016).

For a projection of employer contributions beyond Fiscal Year 2018-19, please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This 5-year projection of future employer contributions supersedes any previous projections we have provided. The "Risk Analysis" section of the valuation report also contains estimated employer contributions in future years under a variety of investment return scenarios. Member contributions, other than cost sharing, are in addition to the above amounts. The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees.

The estimates for Fiscal Year 2018-19 also assume that there are no future contract amendments and no liability gains or losses (such as larger than expected pay increases, more retirements than expected, etc.) This is an important assumption because these gains and losses do occur and can have a significant effect on required contributions. Even for the largest plans or pools, such gains and losses can impact the employer's contributions. These gains and losses cannot be predicted in advance so the projected employer contributions are estimates. The actual required employer contribution for Fiscal Year 2018-19 will be provided in next year's valuation report.

Changes since the Prior Year's Valuation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The policy has no impact on the current year valuation results but is expected to have an impact in future years. More details on the Risk Mitigation Policy can be found on our website.

Besides the above noted changes, there may also be changes specific to the plan such as contract amendments and funding changes.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A, "Statement of Actuarial Data, Methods and Assumptions" of the Section 2 report. We understand that you might have a number of questions about these results. While we are very interested in discussing these results with your agency, in the interest of allowing us to give every public agency their results, we ask that you wait until after August 31 to contact us with actuarial related questions.

If you have other questions, please call our customer contact center at (888) CalPERS or (888-225-7377).

Sincerely,



ALAN MILLIGAN
Chief Actuary



ACTUARIAL VALUATION

as of June 30, 2015

**for the
PEPRA SAFETY POLICE PLAN
of the
CITY OF NEWARK
(CalPERS ID: 2387354187)**

**REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR**

July 1, 2017 - June 30, 2018

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Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the PEPRA SAFETY POLICE PLAN of the CITY OF NEWARK

**(CalPERS ID: 2387354187)
(Rate Plan: 25347)**

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ACTUARIAL CERTIFICATION

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2015 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2015 provided by employers participating in the Safety Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuary has certified that, in their opinion, the valuation of the risk pool containing your PEPRA SAFETY POLICE PLAN has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that the side fund and other Unfunded Accrued Liability bases as of June 30, 2015 and employer contribution as of July 1, 2017, have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary for CalPERS, who is a member of both the American Academy of Actuaries and Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



FRITZIE ARCHULETA, ASA, MAAA
Senior Pension Actuary, CalPERS
Plan Actuary

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 1**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **CHANGES SINCE THE PRIOR YEAR VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This report presents the results of the June 30, 2015 actuarial valuation of the PEPRA SAFETY POLICE PLAN of the CITY OF NEWARK of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for Fiscal Year 2017-18.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The Risk Mitigation Policy does not have an impact on the current year actuarial valuation. More details on the Risk Mitigation Policy can be found on our website.

Purpose of Section 1

This Section 1 report for the PEPRA SAFETY POLICE PLAN of the CITY OF NEWARK of the California Public Employees' Retirement System (CalPERS) was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2015;
- Determine the required employer contribution for this plan for the fiscal year July 1, 2017 through June 30, 2018; and
- Provide actuarial information as of June 30, 2015 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to GASB Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

The use of this report for any other purposes may be inappropriate. In particular, this report does not contain information applicable to alternative benefit costs. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

California Actuarial Advisory Panel Recommendations

This report includes all the basic disclosure elements as described in the *Model Disclosure Elements for Actuarial Valuation Reports* recommended in 2011 by the California Actuarial Advisory Panel (CAAP), with the exception of including the original base amounts of the various components of the unfunded liability in the Schedule of Amortization Bases shown on page 8.

Additionally, this report includes the following "Enhanced Risk Disclosures" also recommended by the CAAP in the Model Disclosure Elements document:

- A "Deterministic Stress Test," projecting future results under different investment income scenarios
- A "Sensitivity Analysis," showing the impact on current valuation results using a 1 percent plus or minus change in the discount rate.

Required Employer Contribution

	Fiscal Year		Fiscal Year	
Required Employer Contribution	2016-17 ¹		2017-18	
Employer Normal Cost Rate	12.082%		11.990%	
<i>Plus Either</i>				
1) Monthly Employer Dollar UAL Payment	\$	72.82	\$	166.76
<i>Or</i>				
2) Annual Lump Sum Prepayment Option	\$	843	\$	1,930

The total minimum required employer contribution is the **sum** of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) **plus** the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars). Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change. § 20572 of the Public Employees' Retirement Law assesses interest at an annual rate of 10 percent if a contracting agency fails to remit the required contributions when due.

	Fiscal Year		Fiscal Year	
	2016-17 ¹		2017-18	
Development of Normal Cost as a Percentage of Payroll				
Base Total Normal Cost for Formula		23.582%		23.490%
Surcharge for Class 1 Benefits ³				
None		0.000%		0.000%
Phase out of Normal Cost Difference ⁴		0.000%		0.000%
Plan's Total Normal Cost		23.582%		23.490%
Plan's Employee Contribution Rate		11.500%		11.500%
Employer Normal Cost Rate		12.082%		11.990%
Projected Payroll for the Contribution Fiscal Year	\$	316,765	\$	332,756
Estimated Employer Contributions Based on Projected Payroll				
Plan's Estimated Employer Normal Cost	\$	38,273	\$	39,897
Plan's Payment on Amortization Bases ²		874		2,001
Total Employer Contribution ⁵	\$	39,147	\$	41,898

¹ The results shown for Fiscal Year 2016-17 reflect the prior year valuation and do not take into account any lump sum payment, side fund payoff, or rate adjustment made after June 30, 2015.

² See page 8 for a breakdown of the Amortization Bases.

³ Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

⁴ The normal cost difference is phased out over a five year period. The phase out of normal cost difference is 100 percent for the first year of pooling, and is incrementally reduced by 20 percent of the original normal cost difference for each subsequent year. This is non-zero only for plans that joined a pool within the past 5 years. Most plans joined a pool June 30, 2003, when risk pooling was implemented.

⁵ As a percentage of projected payroll the UAL contribution is 0.601 percent for an estimated total employer contribution rate of 12.591 percent.

Plan's Funded Status

		June 30, 2014		June 30, 2015
1. Present Value of Projected Benefits (PVB)	\$	868,006	\$	983,762
2. Entry Age Normal Accrued Liability (AL)		36,697		94,601
3. Plan's Market Value of Assets (MVA)		38,886		89,052
4. Unfunded Accrued Liability (UAL) [(2) - (3)]		(2,189)		5,549
5. Funded Ratio [(3) / (2)]		106.0%		94.1%

Projected Employer Contributions

The estimate for Fiscal Year 2018-19 is based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16 (based on year to date return through April 30, 2016).

The table below shows projected employer contributions (before cost sharing) for the next five fiscal years, **assuming CalPERS earns 0.0 percent for Fiscal Year 2015-16 and 7.50 percent every fiscal year thereafter**, and assuming that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the projection period.

Fiscal Year	Required Contribution	Projected Future Employer Contributions				
		2017-18	2018-19	2019-20	2020-21	2021-22
Normal Cost %	11.990%	12.0%	12.0%	12.0%	12.0%	12.0%
UAL \$	\$2,001	\$2,168	\$2,344	\$2,528	\$2,721	\$604

Changes since the Prior Year's Valuation

Benefits

None. This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of Section 2 for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

None.

Subsequent Events

Risk Mitigation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. More details on the Risk Mitigation Policy can be found on our website.

ASSETS AND LIABILITIES

- **ALLOCATION OF PLAN'S SHARE OF POOL'S EXPERIENCE/ASSUMPTION CHANGE**
- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S MVA**
- **SCHEDULE OF PLAN'S SIDE FUND & OTHER AMORTIZATION BASES**
- **30-YEAR AMORTIZATION SCHEDULE AND ALTERNATIVES**
- **EMPLOYER CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	\$	94,601
2.	Projected UAL balance at 6/30/15		690
3.	Pool's Accrued Liability	\$	18,467,886,519
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/15		3,713,009,355
5.	Pool's 2014/15 Investment & Asset (Gain)/Loss		765,720,345
6.	Pool's 2014/15 Other (Gain)/Loss		(2,867,161)
7.	Plan's Share of Pool's Asset (Gain)/Loss $[(1)-(2)]/[(3)-(4)] * (5)$		4,874
8.	Plan's Share of Pool's Other (Gain)/Loss $[(1)]/[(3)] * (6)$		(15)
9.	Plan's New (Gain)/Loss as of 6/30/2015 $[(7)+(8)]$	\$	4,859
10.	Increase in Pool's Accrued Liability due to Change in Assumptions		0
11.	Plan's Share of Pool's Change in Assumptions $[(1)]/[(3)] * (10)$	\$	0

Development of the Plan's Share of Pool's Market Value of Assets

1.	Plan's Accrued Liability	\$	94,601
2.	Plan's UAL	\$	5,549
3.	Plan's Share of Pool's MVA $[(1)-(2)]$	\$	89,052

Schedule of Plan's Side Fund and Other Amortization Bases

There is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2015.
- The employer contribution determined by the valuation is for the fiscal year beginning two years after the valuation date: Fiscal Year 2017-18.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the payment on the UAL for the fiscal year and adjusting for interest.

Reason for Base	Date Established	Amortization Period	Balance 6/30/15	Payment 2015-16	Balance 6/30/16	Payment 2016-17	Amounts for Fiscal 2017-18	
							Balance 6/30/17	Scheduled Payment for 2017-18
FRESH START	06/30/15	5	\$5,549	\$(3,023)	\$9,099	\$874	\$8,876	\$2,001
TOTAL			\$5,549	\$(3,023)	\$9,099	\$874	\$8,876	\$2,001

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed on the previous page. These (gain)/loss bases will be amortized according to Board policy over 30 years with a 5-year ramp-up.

If the total Unfunded Liability is negative (i.e., plan has a surplus), the scheduled payment is \$0, because the minimum required contribution under PEPRA must be at least equal to the normal cost.

30-Year Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to CalPERS amortization policy. There has been considerable interest from many agencies in paying off these unfunded accrued liabilities sooner and the possible savings in doing so. As a result, we have provided alternate amortization schedules to help analyze the current amortization schedule and illustrate the advantages of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternate "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. Note that the payments under each alternate scenario increase by 3 percent for each year into the future. The schedules do not attempt to reflect any experience after June 30, 2015 that may deviate from the actuarial assumptions. Therefore, future amortization payments displayed in the Current Amortization Schedule may not match projected amortization payments shown in connection with Projected Employer Contributions provided elsewhere in this report.

The Current Amortization Schedule typically contains individual bases that are both positive and negative. Positive bases result from plan changes, assumption changes or plan experience that result in increases to unfunded liability. Negative bases result from plan changes, assumption changes or plan experience that result in decreases to unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years such as:

- A positive total unfunded liability with a negative total payment,
- A negative total unfunded liability with a positive total payment, or
- Total payments that completely amortize the unfunded liability over a very short period of time

In any year where one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy. For purposes of this display, total payments include any negative payments. Therefore, the amount of estimated savings may be understated to the extent that negative payments appear in the current schedule.

30-Year Amortization Schedule and Alternatives

Date	<u>Current Amortization Schedule</u>		<u>Alternate Schedules</u>			
	Balance	Payment	0 Year Amortization		0 Year Amortization	
			Balance	Payment	Balance	Payment
6/30/2017	8,875	2,001	N/A	N/A	N/A	N/A
6/30/2018	7,466	2,061				
6/30/2019	5,889	2,123				
6/30/2020	4,130	2,187				
6/30/2021	2,172	2,252				
6/30/2022	0	0				
6/30/2023	0	0				
6/30/2024	0	0				
6/30/2025	0	0				
6/30/2026	0	0				
6/30/2027	0	0				
6/30/2028	0	0				
6/30/2029	0	0				
6/30/2030	0	0				
6/30/2031	0	0				
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6/30/2040	0	0				
6/30/2041	0	0				
6/30/2042	0	0				
6/30/2043	0	0				
6/30/2044	0	0				
6/30/2045	0	0				
6/30/2046	0	0				
Totals		10,624		0		0
Estimated Savings				0		0

Current CalPERS Board policy prioritizes the order for which lump sum contributions in excess of the required employer contribution shall be applied. Excess contributions shall first be applied toward payment on the plan's side fund, and any remainder shall then be applied toward the plan's share of the pool's unfunded accrued liability.

Please contact the plan actuary before making such a payment to ensure that the payment is applied correctly.

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made during a fiscal year.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment (\$)
2016 - 17	12.082%	874
2017 - 18	11.990%	2,001

Funding History

The funding history below shows the plan's actuarial accrued liability, share of the pool's market value of assets, share of the pool's unfunded liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Plan's Share of Pool's Unfunded Liability	Funded Ratio	Annual Covered Payroll
06/30/2013	\$ 1,153	\$ 1,692	\$ (539)	146.7%	\$ 91,089
06/30/2014	36,697	38,886	(2,189)	106.0%	289,885
06/30/2015	94,601	89,052	5,549	94.1%	304,519

RISK ANALYSIS

- **ANALYSIS OF FUTURE INVESTMENT RETURN SCENARIOS**
- **ANALYSIS OF DISCOUNT RATE SENSITIVITY**
- **VOLATILITY RATIOS**
- **HYPOTHETICAL TERMINATION LIABILITY**

Analysis of Future Investment Return Scenarios

The investment return for Fiscal Year 2015-16 was not known at the time this report was produced. The investment return in Fiscal Year 2015-16 as of April 30, 2016 is 0.0 percent before administrative expenses. For purposes of projecting future employer contributions, we are assuming a 0.0 percent investment return for Fiscal Year 2015-16.

The investment return realized during a fiscal year first affects the contribution for the fiscal year two years later. For example, the investment return for Fiscal Year 2015-16 will first be reflected in the June 30, 2016 actuarial valuation that will be used to set the Fiscal Year 2018-19 employer contributions, the Fiscal Year 2016-17 investment return will first be reflected in the June 30, 2017 actuarial valuation that will be used to set the Fiscal Year 2019-20 employer contributions, and so forth.

A sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2016-17, 2017-18, and 2018-19 on the employer contributions for fiscal years 2019-20, 2020-21, and 2021-22. The projected contributions assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

Five different investment return scenarios were selected.

- The first scenario is a -3.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 5th percentile return from July 1, 2016 through June 30, 2019.
- The second scenario is a 2.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 25th percentile return from July 1, 2016 through June 30, 2019.
- The third scenario is a 7.5 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 49th percentile return from July 1, 2016 through June 30, 2019.
- The fourth scenario is a 12.0 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 75th percentile return from July 1, 2016 through June 30, 2019.
- Finally, the last scenario is an 18.9 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 95th percentile return from July 1, 2016 through June 30, 2019.

The table below shows the estimated projected contributions and the estimated increases for the plan under the five different scenarios.

2016-19 Investment Return Scenario	Fiscal Year			Estimated Change Between 2018-19 and 2021-22
	2019-20	2020-21	2021-22	
(3.8%)				
Normal Cost	12.0%	12.0%	12.0%	0.0%
UAL Contribution	\$2,502	\$3,004	\$3,675	\$1,507
2.8%				
Normal Cost	12.0%	12.0%	12.0%	0.0%
UAL Contribution	\$2,410	\$2,730	\$3,136	\$968
7.5%				
Normal Cost	12.0%	12.0%	12.0%	0.0%
UAL Contribution	\$2,344	\$2,528	\$2,721	\$553
12.0%				
Normal Cost	12.0%	12.0%	12.2%	0.2%
UAL Contribution	\$2,290	\$2,360	\$0	\$(2,168)
18.9%				
Normal Cost	12.2%	12.6%	13.0%	1.0%
UAL Contribution	\$2,212	\$0	\$0	\$(2,168)

For the last two scenarios in the table above the results incorporate the impact of CalPERS Risk Mitigation Policy. A 12.0% return would result in a reduction of the discount rate by 0.05% and a return of 18.9% would reduce the discount rate by 0.15%. Reducing the discount rate increases both the plan's accrued liability and normal cost. More details about Risk Mitigation policy can be found on our website.

Analysis of Discount Rate Sensitivity

The following analysis looks at the Fiscal Year 2017-18 total normal cost rates and liabilities under two different discount rate scenarios. Shown below are the total normal cost rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis shows the potential plan impacts if the Public Employees' Retirement Fund (PERF) were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This analysis is intended to illustrate the long-term risk to the contribution rates.

Sensitivity Analysis			
As of June 30, 2015	6.50% Discount Rate (-1%)	7.50% Discount Rate (assumed rate)	8.50% Discount Rate (+1%)
Plan's Total Normal Cost	29.1%	23.5%	19.2%
Accrued Liability	\$120,592	\$94,601	\$74,952
Unfunded Accrued Liability	\$31,540	\$5,549	\$(14,100)

Volatility Ratios

Actuarial calculations are based on a number of assumptions about long-term demographic and economic behavior. Unless these assumptions (terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility, than a plan with an asset-to-payroll ratio of 4. Shown below is the asset volatility ratio, a measure of the plan's current contribution volatility. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Plans that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with a liability-to-payroll ratio of 8 is expected to have twice the contribution volatility of a plan with a liability-to-payroll ratio of 4. The liability volatility ratio is also shown in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The asset volatility ratio, described above, will tend to move closer to the liability volatility ratio as the plan matures.

Rate Volatility	As of June 30, 2015	
1. Market Value of Assets	\$	89,052
2. Payroll		304,519
3. Asset Volatility Ratio (AVR) [(1) / (2)]		0.3
4. Accrued Liability	\$	94,601
5. Liability Volatility Ratio (LVR) [(4) / (2)]		0.3

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2015. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while funding risk is limited. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 2-year period centered around the valuation date.

Market Value of Assets (MVA)	Hypothetical Termination Liability ^{1,2} @ 2.00%	Funded Status	Unfunded Termination Liability @ 2.00%	Hypothetical Termination Liability ^{1,2} @ 3.25%	Funded Status	Unfunded Termination Liability @ 3.25%
\$89,052	\$78,157	113.9%	\$(10,895)	\$78,157	113.9%	\$(10,895)

For plans where active members have little service the hypothetical termination liability methodology used does not fully vest active members upon termination. In these cases the hypothetical termination liability is understated.

¹ The hypothetical liabilities calculated above include a 7 percent mortality contingency load in accordance with Board policy. Other actuarial assumptions, such as wage and inflation assumptions, can be found in Appendix A.

² The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 2.75 percent on June 30, 2015.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2014	June 30, 2015
Reported Payroll	\$ 289,885	\$ 304,519
Projected Payroll for Contribution Purposes	\$ 316,765	\$ 332,756
Number of Members		
Active	3	3
Transferred	0	0
Separated	0	0
Retired	0	0

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

PLAN'S MAJOR BENEFIT OPTIONS

SECTION 1 – PLAN SPECIFIC INFORMATION FOR THE PEPRA SAFETY POLICE PLAN OF THE CITY OF NEWARK

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Appendix B within Section 2 of this report.

	Contract package	
Benefit Provision	Active Police	
Benefit Formula	2.7% @ 57	
Social Security Coverage	No	
Full/Modified	Full	
Employee Contribution Rate	11.50%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	Yes	
Pre-Retirement Death Benefits		
Optional Settlement 2W	Yes	
1959 Survivor Benefit Level	Indexed	
Special	Yes	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	\$500	
Survivor Allowance (PRSA)	No	
COLA	2%	

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

**Section 2 may be found on the CalPERS website
(www.calpers.ca.gov) in the Forms and
Publications section**

ATTACHMENT 1

Miscellaneous Plan Valuation Report



California Public Employees' Retirement System
Actuarial Office
P.O. Box 942701
Sacramento, CA 94229-2701
TTY: (916) 795-3240
(888) 225-7377 phone • (916) 795-2744 fax
www.calpers.ca.gov

August 2016

**MISCELLANEOUS PLAN OF THE CITY OF NEWARK (CalPERS ID: 2387354187)
Annual Valuation Report as of June 30, 2015**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2015 actuarial valuation report of your pension plan. Your 2015 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your CalPERS staff actuary, whose signature appears in the "Actuarial Certification" section on page 1, is available to discuss the report with you after August 31, 2016.

Future Contributions

The exhibit below displays the minimum employer contributions for Fiscal Year 2017-18 and projected contributions for Fiscal Year 2018-19, before any cost sharing. The projected contributions for Fiscal Year 2018-19 are based on the most recent information available, including an estimate of the investment return for Fiscal Year 2015-16, namely 0.0 percent. For a projection of employer contributions beyond Fiscal Year 2018-19, please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This 5-year projection of future employer contributions supersedes any previous projections we have provided. The "Risk Analysis" section of the valuation report also contains estimated employer contributions in future years under a variety of investment return scenarios.

Fiscal Year	Employer Normal Cost Rate	Employer Payment of Unfunded Liability	Employee PEPRA Rate
2017-18	9.412%	\$2,062,413	6.25%
2018-19 (projected)	9.4%	\$2,411,931	N/A

Member contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the above. **The employer contributions in this report do not reflect any cost sharing arrangement you may have with your employees.**

The estimates for Fiscal Year 2018-19 also assume that there are no future contract amendments and no liability gains or losses (such as larger than expected pay increases, more retirements than expected, etc.). This is a very important assumption because these gains and losses do occur and can have a significant impact on required contributions. These gains and losses cannot be predicted in advance so the projected employer contributions are just estimates. The actual required employer contributions for Fiscal Year 2018-19 will be provided in next year's report.

Changes since the Prior Year's Valuation

Beginning with Fiscal Year 2017-18 CalPERS will collect employer contributions toward the plan's unfunded liability as dollar amounts instead of the prior method of a contribution rate. This change will address potential funding issues that could arise from a declining payroll or reduction in the number of active members in the plan. Funding the unfunded liability as a percentage of payroll could lead to the underfunding of the plans. Although employers will be invoiced at the beginning of the fiscal year for their unfunded liability payment the plan's normal cost contribution will continue to be collected as a percentage of payroll.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The policy has no impact on the current year valuation results but is expected to have an impact in future years. More details on the Risk Mitigation Policy can be found on our website.

Besides the above noted changes, there may also be changes specific to the plan such as contract amendments and funding changes.

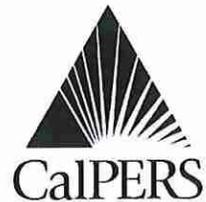
Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A, "Actuarial Methods and Assumptions." The effects of the changes on the required contributions are included in the "Reconciliation of Required Employer Contributions" section.

We understand that you might have a number of questions about these results. While we are very interested in discussing these results with your agency, in the interest of allowing us to give every public agency their results, we ask that you wait until after August 31 to contact us with actuarial questions. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or **(888-225-7377)**.

Sincerely,



ALAN MILLIGAN
Chief Actuary



ACTUARIAL VALUATION

as of June 30, 2015

**for the
MISCELLANEOUS PLAN
of the
CITY OF NEWARK**

(CalPERS ID: 2387354187)

(Rate Plan ID: 420)

**REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR**

July 1, 2017 – June 30, 2018

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ACTUARIAL CERTIFICATION

To the best of our knowledge, this report is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the MISCELLANEOUS PLAN OF THE CITY OF NEWARK. This valuation is based on the member and financial data as of June 30, 2015 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

The undersigned is an actuary for CalPERS, who is a member of the American Academy of Actuaries and the Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



FRITZIE ARCHULETA, ASA, MAAA
Senior Pension Actuary, CalPERS

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF THE REPORT**
- **REQUIRED CONTRIBUTIONS**
- **PLAN'S FUNDED STATUS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **COST**
- **CHANGES SINCE THE PRIOR YEAR'S VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This report presents the results of the June 30, 2015 actuarial valuation of the MISCELLANEOUS PLAN OF THE CITY OF NEWARK of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for Fiscal Year 2017-18.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. The Risk Mitigation Policy does not have an impact on the current year actuarial valuation. More details on the Risk Mitigation Policy can be found on our website.

Purpose of the Report

The actuarial valuation was prepared by the CalPERS Actuarial Office using data as of June 30, 2015. The purpose of the report is to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2015;
- Determine the required employer contributions for the fiscal year July 1, 2017 through June 30, 2018;
- Provide actuarial information as of June 30, 2015 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement No. 68 for an Agent Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

The use of this report for any other purposes may be inappropriate. In particular, this report does not contain information applicable to alternative benefit costs. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

California Actuarial Advisory Panel Recommendations

This report includes all the basic disclosure elements as described in the *Model Disclosure Elements for Actuarial Valuation Reports* recommended in 2011 by the California Actuarial Advisory Panel (CAAP), with the exception of including the original base amounts of the various components of the unfunded liability in the Schedule of Amortization Bases shown on page 15.

Additionally, this report includes the following "Enhanced Risk Disclosures" also recommended by the CAAP in the Model Disclosure Elements document:

- A "Deterministic Stress Test," projecting future results under different investment income scenarios
- A "Sensitivity Analysis," showing the impact on current valuation results using a 1 percent plus or minus change in the discount rate.

Required Contributions

	Fiscal Year
Required Employer Contribution	2017-18
Employer Normal Cost Rate	9.412%
<i>Plus Either</i>	
1) Monthly Employer Dollar UAL Payment	\$ 171,868
<i>Or</i>	
2) Annual UAL Prepayment Option	\$ 1,989,168
Required PEPRA Member Contribution Rate	6.25%
<p><i>The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars). Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change. §20572 of the Public Employees' Retirement Law assesses interest at an annual rate of 10 percent if a contracting agency fails to remit the required contributions when due. For additional detail regarding the determination of the required contribution for PEPRA members, see Appendix D. Required member contributions for Classic members can be found in Appendix B.</i></p>	

	Fiscal Year	Fiscal Year
	2016-17	2017-18
Normal Cost Contribution as a Percentage of Payroll		
Total Normal Cost	17.203%	17.296%
Employee Contribution ¹	7.944%	7.884%
Employer Normal Cost	9.259%	9.412%
Projected Annual Payroll for Contribution Year	\$ 9,103,586	\$ 9,902,550

Estimated Employer Contributions Based On Projected Payroll

Total Normal Cost	\$ 1,566,089	\$ 1,712,745
Employee Contribution ¹	723,189	780,717
Employer Normal Cost	842,900	932,028
Unfunded Liability Contribution	1,808,035	2,062,413
Estimated Total Employer Contribution ²	\$ 2,650,935	\$ 2,994,441

¹ For classic members, this is the percentage specified in the Public Employees Retirement Law, net of any reduction from the use of a modified formula or other factors. For PEPRA members, the member contribution rate is based on 50 percent of the normal cost. A development of PEPRA member contribution rates can be found in Appendix D. Employee cost sharing is not shown in this report.

² As a percentage of projected payroll the UAL contribution for Fiscal Year 2017-18 is 20.827 percent for an estimated total employer contribution rate of 30.239 percent. As determined in the June 30, 2014 valuation, the Fiscal Year 2016-17 UAL contribution is 19.861 percent for a total employer contribution rate of 29.120 percent.

Plan's Funded Status

	June 30, 2014	June 30, 2015
1. Present Value of Projected Benefits	\$ 107,456,346	\$ 111,617,479
2. Entry Age Normal Accrued Liability	96,995,769	100,264,978
3. Market Value of Assets (MVA)	\$ 68,876,473	\$ 68,012,608
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	\$ 28,119,296	\$ 32,252,370
5. Funded Ratio [(3) / (2)]	71.0%	67.8%

Projected Employer Contributions

The estimated employer contribution for Fiscal Year 2018-19 is based on a projection of the most recent information we have available, including an estimated 0.0 percent investment return for Fiscal Year 2015-16.

The table below shows projected employer contributions (before cost sharing) for the next five fiscal years, assuming CalPERS earns 0.0 percent for Fiscal Year 2015-16 and 7.50 percent every fiscal year thereafter, and assuming that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur during the projection period. The projected normal cost percentages do not reflect that the normal cost will decline over time as new employees are hired into PEPPA or other lower cost benefit tiers.

Fiscal Year	Required Contribution	Projected Future Employer Contributions				
		2017-18	2018-19	2019-20	2020-21	2021-22
Normal Cost %	9.412%	9.4%	9.4%	9.4%	9.4%	9.4%
UAL \$	2,062,413	2,411,931	2,780,564	3,009,634	3,247,436	3,436,592

For projected contributions under alternate investment return scenarios, please see the "Analysis of Future Investment Return Scenarios" in the "Risk Analysis" section.

Cost

Actuarial Cost Estimates in General

What will this pension plan cost? Unfortunately, there is no simple answer. There are two major reasons for the complexity of the answer. First, actuarial calculations, including the ones in this report, are based on a number of assumptions about the future. These assumptions can be divided into two categories.

- Demographic assumptions include the percentage of employees that will terminate, die, become disabled, and retire in each future year.
- Economic assumptions include future salary increases for each active employee, and the assumption with the greatest impact: future asset returns at CalPERS for each year into the future until the last dollar is paid to current members of the plan.

While CalPERS has set these assumptions to reflect our best estimate of the real future of the plan, it must be understood that these assumptions are very long-term predictors and will surely not be realized in any one year. For example, while the asset earnings at CalPERS have averaged more than the assumed return of 7.5 percent for the past twenty year period ending June 30, 2015, returns for each fiscal year ranged from negative -24 percent to +21.7 percent.

Second, the very nature of actuarial funding produces the answer to the question of plan cost as the sum of two separate pieces.

- The Normal Cost (i.e., the annual cost associated with one year of service accrual) expressed as a percentage of total active payroll.
- The Past Service Cost or Accrued Liability (i.e., the current value of the benefit for all credited past service of current members) which is expressed as a lump sum dollar amount.

The cost is the sum of a percent of future pay and a lump sum dollar amount. In prior years CalPERS converted Past Service Cost to a percent of payroll and expressed the total required employer contribution as a single rate. Going forward the Past Service Cost will no longer be converted to a percent of payroll and this cost will be invoiced to the employer as a monthly dollar contribution amount with the option to prepay the annual amount at the beginning of the fiscal year. The normal cost will continue to be expressed as a percentage of active payroll with employer and employee contributions payable as part of the payroll reporting process.

Changes since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective, even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B for a summary of the plan provisions used in this valuation. The effect of any mandated benefit changes or plan amendments on the unfunded liability is shown in the "(Gain)/Loss Analysis" and the effect on the employer contribution is shown in the "Reconciliation of Required Employer Contributions." It should be noted that no change in liability or contribution is shown for any plan changes which were already included in the prior year's valuation.

Actuarial Methods and Assumptions

Beginning with Fiscal Year 2017-18 CalPERS will collect employer contributions toward the plan's unfunded liability as dollar amounts instead of the prior method of a contribution rate. This change will address potential funding issues that could arise from a declining payroll or reduction in the number of active members in the plan. Funding the unfunded liability as a percentage of payroll could lead to the underfunding of the plans. Although employers will be invoiced at the beginning of the fiscal year for their unfunded liability payment the plan's normal cost contribution will continue to be collected as a percentage of payroll.

Subsequent Events

Risk Mitigation

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. The policy establishes a mechanism whereby CalPERS investment performance that significantly outperforms the discount rate triggers adjustments to the discount rate, expected investment return and strategic asset allocation targets. A minimum excess investment return of 4% above the existing discount rate is necessary to cause a funding risk mitigation event. More details on the Risk Mitigation Policy can be found on our website.

ASSETS

- **RECONCILIATION OF THE MARKET VALUE OF ASSETS**
- **ASSET ALLOCATION**
- **CALPERS HISTORY OF INVESTMENT RETURNS**

Reconciliation of the Market Value of Assets

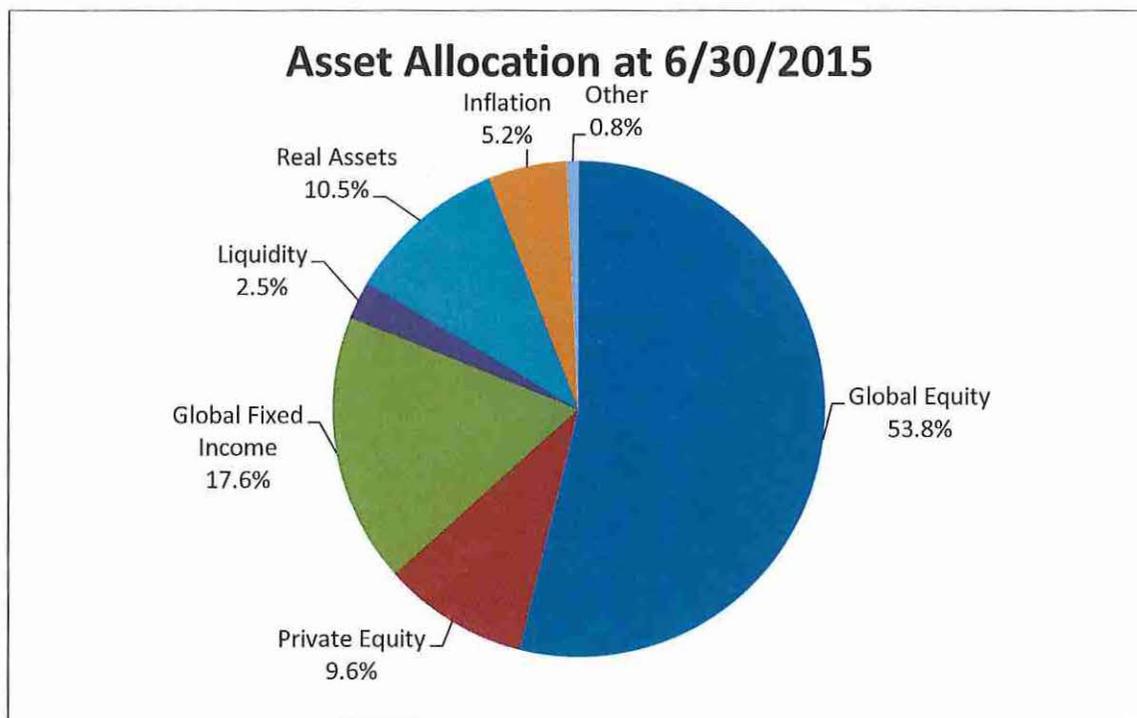
1. Market Value of Assets as of 6/30/14 including Receivables	\$	68,876,473
2. Change in Receivables for Service Buybacks as of 6/30/14		(48,537)
3. Employer Contributions		1,771,614
4. Employee Contributions		975,595
5. Benefit Payments to Retirees and Beneficiaries		(5,042,966)
6. Refunds		(11,925)
7. Lump Sum Payments		0
8. Transfers and Miscellaneous Adjustments		53,584
9. Investment Return		1,438,770
10. Market Value of Assets as of 6/30/15 including Receivables	\$	<u>68,012,608</u>

Asset Allocation

CalPERS adheres to an Asset Allocation Strategy which establishes asset class allocation policy targets and ranges, and manages those asset class allocations within their policy ranges. CalPERS Investment Belief No. 6 recognizes that strategic asset allocation is the dominant determinant of portfolio risk and return. On February 19, 2014, the CalPERS Board of Administration adopted changes to the current asset allocation as shown in the Policy Target Allocation below expressed as a percentage of total assets. The asset allocation has an expected long term blended rate of return of 7.5 percent.

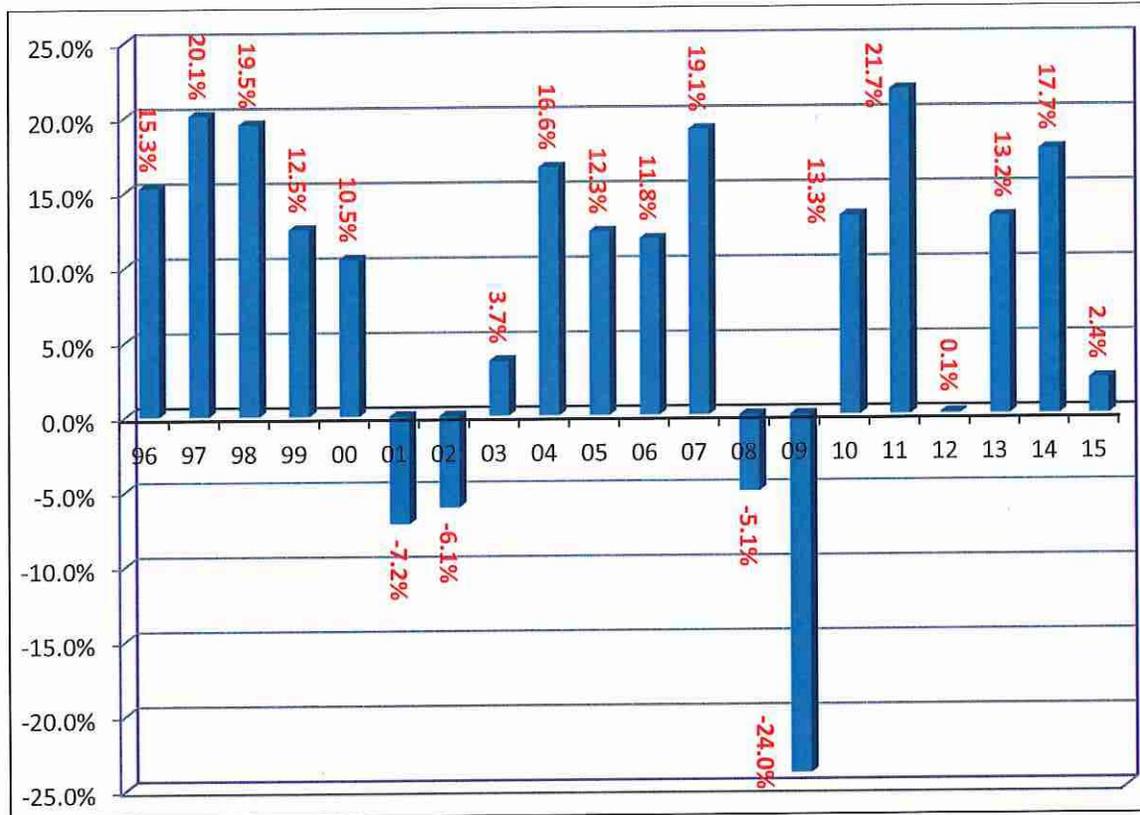
The asset allocation and market value of assets shown below reflect the values of the Public Employees' Retirement Fund (PERF) in its entirety as of June 30, 2015. The assets for CITY OF NEWARK MISCELLANEOUS PLAN are part of the PERF and are invested accordingly.

(A) Asset Class	(B) Market Value (\$ Billion)	(C) Policy Target Allocation
Global Equity	162.5	51.0%
Private Equity	29.0	10.0%
Global Fixed Income	53.1	20.0%
Liquidity	7.5	1.0%
Real Assets	31.8	12.0%
Inflation Sensitive Assets	15.6	6.0%
Other	2.4	0.0%
Total Fund	\$301.9	100.0%



CalPERS History of Investment Returns

The following is a chart with the 20-year historical annual returns of the Public Employees Retirement Fund for each fiscal year ending on June 30. Beginning in 2002, the figures are reported as gross of fees.



The table below shows historical geometric mean annual returns of the Public Employees Retirement Fund for various time periods ending on June 30, 2015, (figures are reported as gross of fees). The geometric mean rate of return is the average rate per period compounded over multiple periods. It should be recognized that in any given year the rate of return is volatile. Although the expected rate of return on the recently adopted new asset allocation is 7.5 percent, the portfolio has an expected volatility of 11.76 percent per year. The volatility is a measure of the risk of the portfolio expressed in the standard deviation of the fund's total return distribution, expressed as a percentage. Consequently, when looking at investment returns, it is more instructive to look at returns over longer time horizons.

History of CalPERS Geometric Mean Rates of Return and Volatilities					
	1 year	5 year	10 year	20 year	30 year
Geometric Return	2.4%	10.7%	6.1%	7.7%	9.1%
Volatility	—	9.4%	14.0%	11.8%	10.5%

LIABILITIES AND CONTRIBUTIONS

- **DEVELOPMENT OF ACCRUED AND UNFUNDED LIABILITIES**
- **(GAIN) / LOSS ANALYSIS 06/30/14 - 06/30/15**
- **SCHEDULE OF AMORTIZATION BASES**
- **30-YEAR AMORTIZATION SCHEDULES AND ALTERNATIVES**
- **RECONCILIATION OF REQUIRED EMPLOYER CONTRIBUTIONS**
- **EMPLOYER CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Development of Accrued and Unfunded Liabilities

	June 30, 2014	June 30, 2015
1. Present Value of Projected Benefits		
a) Active Members	\$ 38,968,134	42,119,687
b) Transferred Members	6,544,365	5,977,722
c) Terminated Members	2,291,393	2,692,167
d) Members and Beneficiaries Receiving Payments	59,652,454	60,827,903
e) Total	\$ 107,456,346	111,617,479
2. Present Value of Future Employer Normal Costs	\$ 5,401,386	5,949,826
3. Present Value of Future Employee Contributions	\$ 5,059,191	5,402,675
4. Entry Age Normal Accrued Liability		
a) Active Members [(1a) - (2) - (3)]	\$ 28,507,557	30,767,186
b) Transferred Members (1b)	6,544,365	5,977,722
c) Terminated Members (1c)	2,291,393	2,692,167
d) Members and Beneficiaries Receiving Payments (1d)	59,652,454	60,827,903
e) Total	\$ 96,995,769	100,264,978
5. Market Value of Assets (MVA)	\$ 68,876,473	68,012,608
6. Unfunded Accrued Liability (UAL) [(4e) - (5)]	\$ 28,119,296	32,252,370
7. Funded Ratio [(5) / (4e)]	71.0%	67.8%

(Gain)/Loss Analysis 6/30/14 – 6/30/15

To calculate the cost requirements of the plan, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year, actual experience is compared to the expected experience based on the actuarial assumptions. This results in actuarial gains or losses, as shown below.

1. Total (Gain)/Loss for the Year	
a) Unfunded Accrued Liability (UAL) as of 6/30/14	\$ 28,119,296
b) Expected Payment on the UAL during 2014/2015	1,280,028
c) Interest through 6/30/15 $[\.075 \times (1a) - ((1.075)^{1/2} - 1) \times (1b)]$	2,061,814
d) Expected UAL before all other changes $[(1a) - (1b) + (1c)]$	28,901,082
e) Change due to plan changes	0
f) Change due to assumption change	0
g) Expected UAL after all other changes $[(1d) + (1e) + (1f)]$	28,901,082
h) Actual UAL as of 6/30/15	32,252,370
i) Total (Gain)/Loss for 2014/2015 $[(1h) - (1g)]$	\$ 3,351,288
2. Contribution (Gain)/Loss for the Year	
a) Expected Contribution (Employer and Employee)	\$ 2,751,413
b) Interest on Expected Contributions	101,313
c) Actual Contributions	2,747,209
d) Interest on Actual Contributions	101,158
e) Expected Contributions with Interest $[(2a) + (2b)]$	2,852,726
f) Actual Contributions with Interest $[(2c) + (2d)]$	2,848,367
g) Contribution (Gain)/Loss $[(2e) - (2f)]$	\$ 4,359
3. Asset (Gain)/Loss for the Year	
a) Market Value of Assets as of 6/30/14	\$ 68,876,473
b) Prior Fiscal Year Receivables	(218,471)
c) Current Fiscal Year Receivables	169,934
d) Contributions Received	2,747,209
e) Benefits and Refunds Paid	(5,054,891)
f) Transfers and Miscellaneous Adjustments	53,584
g) Expected Int. $[\.075 \times (3a + 3b) + ((1.075)^{1/2} - 1) \times ((3d) + (3e) + (3f))]$	5,066,350
h) Expected Assets as of 6/30/15 $[(3a) + (3b) + (3c) + (3d) + (3e) + (3f) + (3g)]$	71,640,188
i) Market Value of Assets as of 6/30/15	68,012,608
j) Asset (Gain)/Loss $[(3h) - (3i)]$	\$ 3,627,580
4. Liability (Gain)/Loss for the Year	
a) Total (Gain)/Loss (1i)	\$ 3,351,288
b) Contribution (Gain)/Loss (2g)	4,359
c) Asset (Gain)/Loss (3j)	3,627,580
d) Liability (Gain)/Loss $[(4a) - (4b) - (4c)]$	\$ (280,651)

Schedule of Amortization Bases

There is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2015.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: Fiscal Year 2017-18.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their required employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the expected payment on the UAL for the fiscal year and adjusting for interest. The expected payment on the UAL for a fiscal year is equal to the Expected Employer Contribution for the fiscal year minus the Expected Normal Cost for the year. The Employer Contribution for the first fiscal year is determined by the actuarial valuation two years ago and the contribution for the second year is from the actuarial valuation one year ago. The Normal Cost Rate for each of the two fiscal years is assumed to be the same as the rate determined by the current valuation. All expected dollar amounts are determined by multiplying the rate by the expected payroll for the applicable fiscal year, based on payroll as of the valuation date.

Reason for Base	Date Established	Amortization Period	Balance 6/30/15	Expected Payment 2015-16	Balance 6/30/16	Expected Payment 2016-17	Balance 6/30/17	Scheduled Payment for 2017-18
ASSUMPTION CHANGE	06/30/03	8	\$1,376,778	\$171,739	\$1,301,974	\$176,891	\$1,216,218	\$182,197
METHOD CHANGE	06/30/04	9	\$(196,202)	\$(22,694)	\$(187,387)	\$(23,375)	\$(177,206)	\$(24,076)
ASSUMPTION CHANGE	06/30/09	14	\$3,724,701	\$326,253	\$3,665,787	\$336,041	\$3,592,307	\$346,122
SPECIAL (GAIN)/LOSS	06/30/09	24	\$31,480	\$2,036	\$31,730	\$2,097	\$31,935	\$2,160
SPECIAL (GAIN)/LOSS	06/30/10	25	\$(559,173)	\$(35,439)	\$(564,367)	\$(36,503)	\$(568,848)	\$(37,598)
ASSUMPTION CHANGE	06/30/11	16	\$1,886,823	\$152,540	\$1,870,178	\$157,116	\$1,847,540	\$161,829
SPECIAL (GAIN)/LOSS	06/30/11	26	\$222,916	\$13,861	\$225,263	\$14,277	\$227,356	\$14,705
PAYMENT (GAIN)/LOSS	06/30/12	27	\$655,129	\$40,011	\$662,779	\$41,212	\$669,758	\$42,448
(GAIN)/LOSS	06/30/12	27	\$13,586,422	\$829,778	\$13,745,071	\$854,671	\$13,889,809	\$880,311
(GAIN)/LOSS	06/30/13	28	\$9,782,644	\$137,593	\$10,373,683	\$283,442	\$10,857,830	\$437,918
ASSUMPTION CHANGE	06/30/14	19	\$4,619,908	\$(35,796)	\$5,003,515	\$95,305	\$5,279,964	\$196,329
(GAIN)/LOSS	06/30/14	29	\$(6,230,342)	\$(72,929)	\$(6,622,003)	\$(93,139)	\$(7,022,085)	\$(191,866)
(GAIN)/LOSS	06/30/15	30	\$3,351,286	\$75,831	\$3,524,009	\$92,485	\$3,692,419	\$51,934
TOTAL			\$32,252,370	\$1,582,784	\$33,030,232	\$1,900,520	\$33,536,997	\$2,062,413

30-Year Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to CalPERS amortization policy. There has been considerable interest from many agencies in paying off these unfunded accrued liabilities sooner and the possible savings in doing so. As a result, we have provided alternate amortization schedules to help analyze the current amortization schedule and illustrate the advantages of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternate "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. Note that the payments under each alternate scenario increase by 3 percent for each year into the future. The schedules do not attempt to reflect any experience after June 30, 2015 that may deviate from the actuarial assumptions. Therefore, future amortization payments displayed in the Current Amortization Schedule may not match projected amortization payments shown in connection with Projected Employer Contributions provided elsewhere in this report.

The Current Amortization Schedule typically contains individual bases that are both positive and negative. Positive bases result from plan changes, assumption changes or plan experience that result in increases to unfunded liability. Negative bases result from plan changes, assumption changes or plan experience that result in decreases to unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years such as:

- A positive total unfunded liability with a negative total payment,
- A negative total unfunded liability with a positive total payment, or
- Total payments that completely amortize the unfunded liability over a very short period of time

In any year where one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy. For purposes of this display, total payments include any negative payments. Therefore, the amount of estimated savings may be understated to the extent that negative payments appear in the current schedule.

30-Year Amortization Schedule and Alternatives

Date	<u>Current Amortization Schedule</u>		<u>Alternate Schedules</u>			
	Balance	Payment	20 Year Amortization		15 Year Amortization	
			Balance	Payment	Balance	Payment
6/30/2017	33,536,997	2,062,413	33,536,997	2,532,225	33,536,997	3,074,321
6/30/2018	33,913,913	2,330,429	33,426,805	2,608,192	32,864,748	3,166,551
6/30/2019	34,041,214	2,612,670	33,229,584	2,686,438	32,046,455	3,261,547
6/30/2020	33,885,432	2,750,238	32,936,445	2,767,031	31,068,295	3,359,393
6/30/2021	33,575,331	2,891,198	32,537,759	2,850,042	29,915,324	3,460,175
6/30/2022	33,095,822	2,977,936	32,023,105	2,935,543	28,571,387	3,563,981
6/30/2023	32,490,421	3,067,272	31,381,202	3,023,609	27,019,027	3,670,900
6/30/2024	31,746,986	3,159,291	30,599,847	3,114,318	25,239,384	3,781,027
6/30/2025	30,852,389	3,023,266	29,665,842	3,207,747	23,212,086	3,894,458
6/30/2026	30,031,729	3,145,378	28,564,917	3,303,980	20,915,132	4,011,292
6/30/2027	29,022,912	3,239,739	27,281,647	3,403,099	18,324,772	4,131,630
6/30/2028	27,840,597	3,336,930	25,799,362	3,505,192	15,415,364	4,255,579
6/30/2029	26,468,836	3,437,041	24,100,054	3,610,348	12,159,238	4,383,247
6/30/2030	24,890,402	3,540,151	22,164,270	3,718,658	8,526,534	4,514,744
6/30/2031	23,086,675	3,122,815	19,971,003	3,830,218	4,485,038	4,650,186
6/30/2032	21,580,374	3,063,562	17,497,574	3,945,125		
6/30/2033	20,022,532	2,738,254	14,719,500	4,063,478		
6/30/2034	18,685,140	2,658,151	11,610,358	4,185,383		
6/30/2035	17,330,495	2,570,776	8,141,638	4,310,944		
6/30/2036	15,964,844	2,475,768	4,282,579	4,440,272		
6/30/2037	14,595,275	2,550,040				
6/30/2038	13,045,983	2,626,543				
6/30/2039	11,301,174	2,705,340				
6/30/2040	9,343,808	2,786,499				
6/30/2041	7,155,489	2,568,970				
6/30/2042	5,028,587	2,619,989				
6/30/2043	2,689,268	2,446,960				
6/30/2044	353,901	244,139				
6/30/2045	127,314	18,155				
6/30/2046	118,039	122,386				
Totals		76,892,299		68,041,842		57,179,031
Estimated Savings				8,850,457		19,713,268

Reconciliation of Required Employer Contributions

Normal Cost (% of Payroll)

1. For Period 7/1/16 – 6/30/17	
a) Employer Normal Cost	9.259%
b) Employee Contribution	7.944%
c) Total Normal Cost	17.203%
2. Effect of changes since the prior year annual valuation	
a) Effect of changes in demographics results	0.093%
b) Effect of plan changes	0.000%
c) Effect of changes in assumptions	0.000%
d) Net effect of the changes above [sum of (a) through (c)]	0.093%
3. For Period 7/1/17 – 6/30/18	
a) Employer Normal Cost	9.412%
b) Employee Contribution	7.884%
c) Total Normal Cost	17.296%
Employer Normal Cost Change [(3a) – (1a)]	0.153%
Employee Contribution Change [(3b) – (1b)]	(0.060%)

Unfunded Liability Contribution (\$)

1. For Period 7/1/16 – 6/30/17	1,808,035
2. Effect of changes since the prior year annual valuation	
a) Effect of changes in demographics and financial results	51,934
b) Effect of plan changes	0
c) Effect of changes in assumptions	0
d) Effect of progression of amortization payments	202,444
e) Effect of changes due to Fresh Start	0
f) Effect of elimination of amortization base	0
g) Net effect of the changes above [sum of (a) through (f)]	254,378
3. For Period 7/1/17 – 6/30/18 [(1)+(2g)]	2,062,413

The amounts shown for the period 7/1/16 – 6/30/17 may be different if a prepayment of unfunded actuarial liability is made or a plan change became effective after the prior year's actuarial valuation was performed.

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made during a fiscal year.

Fiscal Year	Employer Normal Cost	Required By Valuation	
		Unfunded Rate	Unfunded Liability Payment (\$)
2012 - 13	8.942%	12.054%	N/A
2013 - 14	9.264%	13.882%	N/A
2014 - 15	9.070%	15.050%	N/A
2015 - 16	9.190%	17.070%	N/A
2016 - 17	9.259%	19.861%	N/A
2017 - 18	9.412%	N/A	2,062,413

Funding History

The table below shows the recent history of the actuarial accrued liability, the market value of assets, the funded ratio and the annual covered payroll.

Valuation Date	Accrued Liability	Market Value of Assets (MVA)	Unfunded Liability	Funded Ratio	Annual Covered Payroll
06/30/10	\$ 78,859,645	\$ 48,676,639	\$ 30,183,006	61.7%	\$ 8,785,314
06/30/11	83,229,864	56,986,931	26,242,933	68.5%	8,272,628
06/30/12	85,946,250	54,906,056	31,040,194	63.9%	8,725,759
06/30/13	89,227,402	60,391,817	28,835,585	67.7%	8,661,759
06/30/14	96,995,769	68,876,473	28,119,296	71.0%	8,331,071
06/30/15	100,264,978	68,012,608	32,252,370	67.8%	9,062,236

RISK ANALYSIS

- **ANALYSIS OF FUTURE INVESTMENT RETURN SCENARIOS**
- **ANALYSIS OF DISCOUNT RATE SENSITIVITY**
- **VOLATILITY RATIOS**
- **HYPOTHETICAL TERMINATION LIABILITY**

Analysis of Future Investment Return Scenarios

The investment return for Fiscal Year 2015-16 was not known at the time this report was produced. The investment return in Fiscal Year 2015-16 as of April 30, 2016 is 0.0 percent before administrative expenses. For purposes of projecting future employer contributions, we are assuming a 0.0 percent investment return for Fiscal Year 2015-16.

The investment return realized during a fiscal year first affects the required contribution for the fiscal year two years later. For example, the investment return for Fiscal Year 2015-16 will first be reflected in the June 30, 2016 actuarial valuation that will be used to set the employer contribution for Fiscal Year 2018-19. The Fiscal Year 2016-17 investment return will first be reflected in the June 30, 2017 actuarial valuation that will be used to set the employer contribution for Fiscal Year 2019-20 and so forth.

As part of this report, a sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2016-17, 2017-18 and 2018-19 on the 2019-20, 2020-21 and 2021-22 employer contributions. Once again, the projections assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

Five different investment return scenarios were selected.

- The first scenario is a -3.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 5th percentile return from July 1, 2016 through June 30, 2019.
- The second scenario is a 2.8 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 25th percentile return from July 1, 2016 through June 30, 2019.
- The third scenario is a 7.5 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 49th percentile return from July 1, 2016 through June 30, 2019.
- The fourth scenario is a 12.0 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 75th percentile return from July 1, 2016 through June 30, 2019.
- Finally, the last scenario is an 18.9 percent return for each of the 2016-17, 2017-18, and 2018-19 fiscal years. Based on the current investment allocation, this is what one would expect if the markets were to give us about a 95th percentile return from July 1, 2016 through June 30, 2019.

The table below shows the estimated projected contributions and the estimated increases for the plan under the five different scenarios.

2016-19 Investment Return Scenario	Fiscal Year			Estimated Change Between 2018-19 and 2021-22
	2019-20	2020-21	2021-22	
(3.8%)				
Normal Cost	9.4%	9.4%	9.4%	0.0%
UAL Contribution	\$2,899,864	\$3,366,958	\$3,961,375	\$1,549,444
2.8%				
Normal Cost	9.4%	9.4%	9.4%	0.0%
UAL Contribution	\$2,830,195	\$3,161,563	\$3,557,622	\$1,145,691
7.5%				
Normal Cost	9.4%	9.4%	9.4%	0.0%
UAL Contribution	\$2,780,564	\$3,009,634	\$3,247,436	\$835,505
12.0%				
Normal Cost	9.6%	9.8%	10.1%	0.7%
UAL Contribution	\$2,730,349	\$2,864,718	\$2,955,531	\$543,600
18.9%				
Normal Cost	10.1%	10.7%	11.4%	2.0%
UAL Contribution	\$2,653,239	\$2,643,718	\$2,505,927	\$93,996

For the last two scenarios in the table above the results incorporate the impact of CalPERS Risk Mitigation Policy. A 12.0% return would result in a reduction of the discount rate by 0.05% and a return of 18.9% would reduce the discount rate by 0.15%. Reducing the discount rate increases both the plan's accrued liability and normal cost. While the projections reflect estimated changes to the normal cost due to lower discount rates, they do not reflect the possible increase in the PEPRA member contribution rate in such scenarios. More details about the Risk Mitigation policy can be found on our website.

The projected normal cost percentages do not reflect that the normal cost will decline over time as new employees are hired into PEPRA or other lower cost benefit tiers.

Analysis of Discount Rate Sensitivity

The following analysis looks at the Fiscal Year 2017-18 total normal cost rates and liabilities under two different discount rate scenarios. Shown below are the total normal cost rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis shows the potential plan impacts if the PERF were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This type of analysis gives the reader a sense of the long-term risk to required contributions.

Sensitivity Analysis			
As of June 30, 2015	6.50% Discount Rate (-1%)	7.50% Discount Rate (assumed rate)	8.50% Discount Rate (+1%)
Plan's Total Normal Cost	21.634%	17.296%	13.999%
Accrued Liability	\$113,035,381	\$100,264,978	\$89,654,178
Unfunded Accrued Liability	\$45,022,773	\$32,252,370	\$21,641,570

Volatility Ratios

The actuarial calculations supplied in this communication are based on a number of assumptions about long-term demographic and economic behavior. Unless these assumptions (terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 4. Shown below is the asset volatility ratio, a measure of the plan's current volatility. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Plans that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with a liability-to-payroll ratio of 8 is expected to have twice the contribution volatility of a plan with a liability-to-payroll ratio of 4. The liability volatility ratio is also included in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The asset volatility ratio, described above, will tend to move closer to the liability volatility ratio as the plan matures.

Contribution Volatility	As of June 30, 2015	
1. Market Value of Assets without Receivables	\$	67,842,674
2. Payroll		9,062,236
3. Asset Volatility Ratio (AVR) [(1) / (2)]		7.5
4. Accrued Liability	\$	100,264,978
5. Liability Volatility Ratio (LVR) [(4) / (2)]		11.1

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2015. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For this hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while limiting the funding risk. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate assumption. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 2-year period centered around the valuation date.

Market Value of Assets (MVA)	Hypothetical Termination Liability^{1,2} @ 2.00%	Funded Status	Unfunded Termination Liability @ 2.00%	Hypothetical Termination Liability^{1,2} @ 3.25%	Funded Status	Unfunded Termination Liability @ 3.25%
\$68,012,608	\$196,497,438	34.6%	\$128,484,830	\$165,138,319	41.2%	\$97,125,711

¹ The hypothetical liabilities calculated above include a 7 percent mortality contingency load in accordance with Board policy. Other actuarial assumptions, such as wage and inflation assumptions, can be found in Appendix A.

² The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 2.75 percent on June 30, 2015.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

PLAN'S MAJOR BENEFIT PROVISIONS

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in the following section of this Appendix.

Benefit Provision	Contract Package			
	Active Misc	Active Misc	Inactive Misc	Receiving Misc
Benefit Formula	2.5% @ 55	2.0% @ 62	2.0% @ 55	
Social Security Coverage	No	No	No	
Full/Modified	Full	Full	Full	
Employee Contribution Rate	8.00%	6.25%		
Final Average Compensation Period	One Year	Three Year	One Year	
Sick Leave Credit	Yes	Yes	Yes	
Non-Industrial Disability	Standard	Standard	Standard	
Industrial Disability	No	No	No	
Pre-Retirement Death Benefits				
Optional Settlement 2W	Yes	Yes	Yes	
1959 Survivor Benefit Level	Indexed	Indexed	Indexed	
Special	No	No	No	
Alternate (firefighters)	No	No	No	
Post-Retirement Death Benefits				
Lump Sum	\$500	\$500	\$500	\$500
Survivor Allowance (PRSA)	No	No	No	No
COLA	2%	2%	2%	2%

APPENDICES

- **APPENDIX A – ACTUARIAL METHODS AND ASSUMPTIONS**
- **APPENDIX B – PRINCIPAL PLAN PROVISIONS**
- **APPENDIX C – PARTICIPANT DATA**
- **APPENDIX D – DEVELOPMENT OF PEPRA MEMBER CONTRIBUTION RATES**
- **APPENDIX E – GLOSSARY OF ACTUARIAL TERMS**

APPENDIX A

ACTUARIAL METHODS AND ASSUMPTIONS

- **ACTUARIAL DATA**
- **ACTUARIAL METHODS**
- **ACTUARIAL ASSUMPTIONS**
- **MISCELLANEOUS**

Actuarial Data

As stated in the Actuarial Certification, the data which serves as the basis of this valuation has been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of this valuation, except that data does not always contain the latest salary information for former members now in reciprocal systems and does not recognize the potential for unusually large salary deviation in certain cases such as elected officials. Therefore, salary information in these cases may not be accurate. These situations are relatively infrequent, however, and when they do occur, they generally do not have a material impact on the required employer contributions.

Actuarial Methods

Actuarial Cost Method

The actuarial cost method used is the Entry Age Normal Cost Method. Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percentage of pay in each year from the member's age of hire (entry age) to their assumed retirement age on the valuation date. The cost allocated to the current fiscal year is called the normal cost.

The actuarial accrued liability for active members is then calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for members currently receiving benefits and for members entitled to deferred benefits is equal to the present value of the benefits expected to be paid. No normal costs are applicable for these participants.

Amortization of Unfunded Actuarial Accrued Liability

The excess of the total actuarial accrued liability over the market value of plan assets is called the unfunded actuarial accrued liability (UAL). Funding requirements are determined by adding the normal cost and an amortization payment toward the unfunded liability. Commencing with the June 30, 2013 valuation, all new gains or losses are tracked and amortized over a fixed 30-year period with a 5 year ramp up at the beginning and a 5 year ramp down at the end of the amortization period. All changes in liability due to plan amendments (other than golden handshakes) are amortized over a 20-year period with no ramp. Changes in actuarial assumptions, or changes in actuarial methodology are amortized over a 20-year period with a 5 year ramp up at the beginning and a 5 year ramp down at the end of the amortization period. Changes in unfunded accrued liability due to a Golden Handshake will be amortized over a period of 5 years.

Exceptions for Inconsistencies:

An exception to the amortization rules above is used whenever their application results in inconsistencies. In these cases, a "fresh start" approach is used. This means that the current unfunded actuarial liability is projected and amortized over a set number of years. For example, a fresh start is needed in the following situations:

- 1) When a positive payment would be required on a negative unfunded actuarial liability (or conversely a negative payment on a positive unfunded actuarial liability); or
- 2) When there are excess assets, rather than an unfunded liability. In this situation, a 30-year fresh start is used.

It should be noted that the actuary may determine that a fresh start is necessary under other circumstances. In all cases of a fresh start, the period is set by the actuary at what is deemed appropriate; however, the period will not be greater than 30 years.

Exceptions for Inactive Plans:

The following exceptions apply to plans classified as Inactive. These plans have no active members and no expectation to have active members in the future.

- Amortization of unfunded liability is on a "level dollar" basis rather than a "level percent of pay" basis
- Actuarial judgment will be used to shorten amortization periods for Inactive plans with existing periods that are deemed too long given the duration of the liability. In many cases, a Fresh Start approach with a 20 year closed period will be used. However, the specific demographics of the plan will be used to determine if periods shorter or longer than 20 years may be more appropriate.

Asset Valuation Method

It is the policy of the CalPERS Board of Administration to use professionally accepted amortization methods to eliminate a surplus or an unfunded accrued liability in a manner that maintains benefit security for the members of the System while minimizing substantial variations in required employer contributions. On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the employer contribution for Fiscal Year 2015-16, CalPERS employs a policy that amortizes all gains and losses over a fixed 30-year period. The increase or decrease in the rate is then spread directly over a 5-year period. This method is referred to as "direct rate smoothing." CalPERS no longer uses an actuarial value of assets and only uses the market value of assets. The direct rate smoothing method is equivalent to a method using a 5 year asset smoothing period with no actuarial value of asset corridor and a 25-year amortization period for gains and losses.

PEPRA Normal Cost Rate Methodology

Per Government Code Section 7522.30(b) the "normal cost rate" shall mean the annual actuarially determined normal cost for the plan of retirement benefits provided to the new member and shall be established based on actuarial assumptions used to determine the liabilities and costs as part of the annual actuarial valuation. The plan of retirement benefits shall include any elements that would impact the actuarial determination of the normal cost, including, but not limited to, the retirement formula, eligibility and vesting criteria, ancillary benefit provisions, and any automatic cost-of-living adjustments as determined by the public retirement system.

Each non-pooled plan is considered to be stable with a sufficiently large demographic of actives. It is preferable to determine normal cost using a large active population ongoing so that this rate remains relatively stable. The total PEPRA normal cost will be calculated using all active members within a non-pooled plan. Accordingly, plans will be funded equally between employer and employee based on the demographics of the employees of that employer. As each non-pooled plan builds up to either 100+ active PEPRA members or half of their active population is under the PEPRA formula, the total PEPRA normal cost will be based on the active PEPRA population in the plan.

Actuarial Assumptions

In 2014, CalPERS completed a 2-year asset liability management study incorporating actuarial assumptions and strategic asset allocation. On February 19, 2014, the CalPERS Board of Administration adopted relatively modest changes to the current asset allocation that will reduce the expected volatility of returns. The adopted asset allocation is expected to have a long-term blended return that continues to support a discount rate assumption of 7.5 percent. The Board also approved several changes to the demographic assumptions that more closely align with actual experience. The most significant of these is mortality improvement to acknowledge the greater life expectancies we are seeing in our membership and expected continued improvements. The new actuarial assumptions were first used in the June 30, 2014 valuation to set the Fiscal Year 2016-17 contribution for public agency employers. The increase in liability due to new actuarial assumptions is amortized over a 20-year period with a 5-year ramp-up/ramp-down in accordance with Board policy. These new actuarial assumptions are set forth in this section.

For more details and additional rationale for the selection of the actuarial assumptions, please refer to the CalPERS Experience Study and Review of Actuarial Assumptions report from January 2014 that can be found on the CalPERS website under: "Forms and Publications". Click on "View All" and search for Experience Study.

All actuarial assumptions (except the discount rates used for the hypothetical termination liability) represent an estimate of future experience rather than observations of the estimates inherent in market data.

Economic Assumptions

Discount Rate

7.5 percent compounded annually (net of expenses). This assumption is used for all plans.

Termination Liability Discount Rate

The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date.

The hypothetical termination liabilities in this report are calculated using an observed range of market interest rates. This range is based on the lowest and highest 20-year Treasury bond observed during an approximate 2-year period centered around the valuation date. The 20-year Treasury bond has a similar duration to most plan liabilities and serves as a good proxy for the termination discount rate. The 20-year Treasury yield was 2.75 percent on June 30, 2015.

Salary Growth

Annual increases vary by category, entry age, and duration of service. A sample of assumed increases are shown below.

Public Agency Miscellaneous

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1220	0.1160	0.1020
1	0.0990	0.0940	0.0830
2	0.0860	0.0810	0.0710
3	0.0770	0.0720	0.0630
4	0.0700	0.0650	0.0570
5	0.0640	0.0600	0.0520
10	0.0460	0.0430	0.0390
15	0.0420	0.0400	0.0360
20	0.0390	0.0380	0.0340
25	0.0370	0.0360	0.0330
30	0.0350	0.0340	0.0320

Public Agency Fire

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.2000	0.1980	0.1680
1	0.1490	0.1460	0.1250
2	0.1200	0.1160	0.0990
3	0.0980	0.0940	0.0810
4	0.0820	0.0780	0.0670
5	0.0690	0.0640	0.0550
10	0.0470	0.0460	0.0420
15	0.0440	0.0420	0.0390
20	0.0420	0.0390	0.0360
25	0.0400	0.0370	0.0340
30	0.0380	0.0360	0.0340

Public Agency Police

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1500	0.1470	0.1310
1	0.1160	0.1120	0.1010
2	0.0950	0.0920	0.0830
3	0.0810	0.0780	0.0700
4	0.0700	0.0670	0.0600
5	0.0610	0.0580	0.0520
10	0.0450	0.0430	0.0370
15	0.0450	0.0430	0.0370
20	0.0450	0.0430	0.0370
25	0.0450	0.0430	0.0370
30	0.0450	0.0430	0.0370

Salary Growth (continued)

Public Agency County Peace Officers			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1770	0.1670	0.1500
1	0.1340	0.1260	0.1140
2	0.1080	0.1030	0.0940
3	0.0900	0.0860	0.0790
4	0.0760	0.0730	0.0670
5	0.0650	0.0620	0.0580
10	0.0470	0.0450	0.0410
15	0.0460	0.0450	0.0390
20	0.0460	0.0450	0.0380
25	0.0460	0.0450	0.0380
30	0.0460	0.0440	0.0380

Schools			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.0900	0.0880	0.0820
1	0.0780	0.0750	0.0700
2	0.0700	0.0680	0.0630
3	0.0650	0.0630	0.0580
4	0.0610	0.0590	0.0540
5	0.0580	0.0560	0.0510
10	0.0460	0.0450	0.0410
15	0.0420	0.0410	0.0380
20	0.0390	0.0380	0.0350
25	0.0370	0.0350	0.0330
30	0.0350	0.0330	0.0310

- The Miscellaneous salary scale is used for Local Prosecutors.
- The Police salary scale is used for Other Safety, Local Sheriff, and School Police.

Overall Payroll Growth

3.00 percent compounded annually (used in projecting the payroll over which the unfunded liability is amortized). This assumption is used for all plans.

Inflation

2.75 percent compounded annually. This assumption is used for all plans.

Non-valued Potential Additional Liabilities

The potential liability loss for a cost-of-living increase exceeding the 2.75 percent inflation assumption, and any potential liability loss from future member service purchases are not reflected in the valuation.

Miscellaneous Loading Factors

Credit for Unused Sick Leave

Total years of service is increased by 1 percent for those plans that have accepted the provision providing Credit for Unused Sick Leave.

Conversion of Employer Paid Member Contributions (EPMC)

Total years of service is increased by the Employee Contribution Rate for those plans with the provision providing for the Conversion of Employer Paid Member Contributions (EPMC) during the final compensation period.

Norris Decision (Best Factors)

Employees hired prior to July 1, 1982 have projected benefit amounts increased in order to reflect the use of "Best Factors" in the calculation of optional benefit forms. This is due to a 1983 Supreme Court decision, known as the Norris decision, which required males and females to be treated equally in the determination of benefit amounts. Consequently, anyone already employed at that time is given the best possible conversion factor when optional benefits are determined. No loading is necessary for employees hired after July 1, 1982.

Termination Liability

The termination liabilities include a 7 percent contingency load. This load is for unforeseen improvements in mortality.

Demographic Assumptions

Pre-Retirement Mortality

Non-industrial death rates vary by age and gender. Industrial death rates vary by age. See sample rates in table below. The non-industrial death rates are used for all plans. The industrial death rates are used for safety plans (except for Local Prosecutor safety members where the corresponding miscellaneous plan does not have the Industrial Death Benefit).

Age	Non-Industrial Death (Not Job-Related)		Industrial Death (Job-Related)
	Male	Female	Male and Female
20	0.00031	0.00020	0.00003
25	0.00040	0.00023	0.00007
30	0.00049	0.00025	0.00010
35	0.00057	0.00035	0.00012
40	0.00075	0.00050	0.00013
45	0.00106	0.00071	0.00014
50	0.00155	0.00100	0.00015
55	0.00228	0.00138	0.00016
60	0.00308	0.00182	0.00017
65	0.00400	0.00257	0.00018
70	0.00524	0.00367	0.00019
75	0.00713	0.00526	0.00020
80	0.00990	0.00814	0.00021

Miscellaneous plans usually have industrial death rates set to zero unless the agency has specifically contracted for industrial death benefits. If so, each non-industrial death rate shown above will be split into two components; 99 percent will become the non-industrial death rate and 1 percent will become the industrial death rate.

Post-Retirement Mortality

Rates vary by age, type of retirement, and gender. See sample rates in table below. These rates are used for all plans.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00501	0.00466	0.01680	0.01158	0.00501	0.00466
55	0.00599	0.00416	0.01973	0.01149	0.00599	0.00416
60	0.00710	0.00436	0.02289	0.01235	0.00754	0.00518
65	0.00829	0.00588	0.02451	0.01607	0.01122	0.00838
70	0.01305	0.00993	0.02875	0.02211	0.01635	0.01395
75	0.02205	0.01722	0.03990	0.03037	0.02834	0.02319
80	0.03899	0.02902	0.06083	0.04725	0.04899	0.03910
85	0.06969	0.05243	0.09731	0.07762	0.07679	0.06251
90	0.12974	0.09887	0.14804	0.12890	0.12974	0.09887
95	0.22444	0.18489	0.22444	0.21746	0.22444	0.18489
100	0.32536	0.30017	0.32536	0.30017	0.32536	0.30017
105	0.58527	0.56093	0.58527	0.56093	0.58527	0.56093
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The post-retirement mortality rates above include 20 years of projected on-going mortality improvement using Scale BB published by the Society of Actuaries.

Marital Status

For active members, a percentage who are married upon retirement is assumed according to member category as shown in the following table.

Member Category	Percent Married
Miscellaneous Member	85%
Local Police	90%
Local Fire	90%
Other Local Safety	90%
School Police	90%

Age of Spouse

It is assumed that female spouses are 3 years younger than male spouses. This assumption is used for all plans.

Terminated Members

It is assumed that terminated members refund immediately if non-vested. Terminated members who are vested are assumed to follow the same service retirement pattern as active members but with a load to reflect the expected higher rates of retirement, especially at lower ages. The following table shows the load factors that are applied to the service retirement assumption for active members to obtain the service retirement pattern for separated vested members:

Age	Load Factor Miscellaneous	Load Factor Safety
50	190%	310%
51	110%	190%
52	110%	105%
53 through 54	100%	105%
55	100%	140%
56 and above	100% (no change)	100% (no change)

Termination with Refund

Rates vary by entry age and service for miscellaneous plans. Rates vary by service for safety plans. See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1742	0.1674	0.1606	0.1537	0.1468	0.1400
1	0.1545	0.1477	0.1409	0.1339	0.1271	0.1203
2	0.1348	0.1280	0.1212	0.1142	0.1074	0.1006
3	0.1151	0.1083	0.1015	0.0945	0.0877	0.0809
4	0.0954	0.0886	0.0818	0.0748	0.0680	0.0612
5	0.0212	0.0193	0.0174	0.0155	0.0136	0.0116
10	0.0138	0.0121	0.0104	0.0088	0.0071	0.0055
15	0.0060	0.0051	0.0042	0.0032	0.0023	0.0014
20	0.0037	0.0029	0.0021	0.0013	0.0005	0.0001
25	0.0017	0.0011	0.0005	0.0001	0.0001	0.0001
30	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001
35	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
0	0.0710	0.1013	0.0997
1	0.0554	0.0636	0.0782
2	0.0398	0.0271	0.0566
3	0.0242	0.0258	0.0437
4	0.0218	0.0245	0.0414
5	0.0029	0.0086	0.0145
10	0.0009	0.0053	0.0089
15	0.0006	0.0027	0.0045
20	0.0005	0.0017	0.0020
25	0.0003	0.0012	0.0009
30	0.0003	0.0009	0.0006
35	0.0003	0.0009	0.0006

The police termination and refund rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1730	0.1627	0.1525	0.1422	0.1319	0.1217
1	0.1585	0.1482	0.1379	0.1277	0.1174	0.1071
2	0.1440	0.1336	0.1234	0.1131	0.1028	0.0926
3	0.1295	0.1192	0.1089	0.0987	0.0884	0.0781
4	0.1149	0.1046	0.0944	0.0841	0.0738	0.0636
5	0.0278	0.0249	0.0221	0.0192	0.0164	0.0135
10	0.0172	0.0147	0.0122	0.0098	0.0074	0.0049
15	0.0115	0.0094	0.0074	0.0053	0.0032	0.0011
20	0.0073	0.0055	0.0038	0.0020	0.0002	0.0002
25	0.0037	0.0023	0.0010	0.0002	0.0002	0.0002
30	0.0015	0.0003	0.0002	0.0002	0.0002	0.0002
35	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

Termination with Vested Benefits

Rates vary by entry age and service for miscellaneous plans. Rates vary by service for safety plans. See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0656	0.0597	0.0537	0.0477	0.0418
10	0.0530	0.0466	0.0403	0.0339	0.0000
15	0.0443	0.0373	0.0305	0.0000	0.0000
20	0.0333	0.0261	0.0000	0.0000	0.0000
25	0.0212	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
5	0.0162	0.0163	0.0265
10	0.0061	0.0126	0.0204
15	0.0058	0.0082	0.0130
20	0.0053	0.0065	0.0074
25	0.0047	0.0058	0.0043
30	0.0045	0.0056	0.0030
35	0.0000	0.0000	0.0000

- When a member is eligible to retire, the termination with vested benefits probability is set to zero.
- After termination with vested benefits, a miscellaneous member is assumed to retire at age 59 and a safety member at age 54.
- The Police termination with vested benefits rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0816	0.0733	0.0649	0.0566	0.0482
10	0.0629	0.0540	0.0450	0.0359	0.0000
15	0.0537	0.0440	0.0344	0.0000	0.0000
20	0.0420	0.0317	0.0000	0.0000	0.0000
25	0.0291	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Non-Industrial (Not Job-Related) Disability

Rates vary by age and gender for miscellaneous plans. Rates vary by age and category for safety plans.

Age	Miscellaneous		Fire	Police	County Peace Officer	Schools	
	Male	Female	Male and Female	Male and Female	Male and Female	Male	Female
20	0.0002	0.0001	0.0001	0.0001	0.0001	0.0003	0.0003
25	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
30	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	0.0002
35	0.0005	0.0008	0.0001	0.0003	0.0004	0.0005	0.0004
40	0.0012	0.0016	0.0001	0.0004	0.0007	0.0015	0.0010
45	0.0019	0.0022	0.0002	0.0005	0.0013	0.0030	0.0019
50	0.0021	0.0023	0.0005	0.0008	0.0018	0.0039	0.0024
55	0.0022	0.0018	0.0010	0.0013	0.0010	0.0036	0.0021
60	0.0022	0.0014	0.0015	0.0020	0.0006	0.0031	0.0014

- The miscellaneous non-industrial disability rates are used for Local Prosecutors.
- The police non-industrial disability rates are also used for Other Safety, Local Sheriff, and School Police.

Industrial (Job-Related) Disability

Rates vary by age and category.

Age	Fire	Police	County Peace Officer
20	0.0001	0.0000	0.0004
25	0.0003	0.0017	0.0013
30	0.0007	0.0048	0.0025
35	0.0016	0.0079	0.0037
40	0.0030	0.0110	0.0051
45	0.0053	0.0141	0.0067
50	0.0277	0.0185	0.0092
55	0.0409	0.0479	0.0151
60	0.0583	0.0602	0.0174

- The police industrial disability rates are also used for Local Sheriff and Other Safety.
- Fifty percent of the police industrial disability rates are used for School Police.
- One percent of the police industrial disability rates are used for Local Prosecutors.
- Normally, rates are zero for miscellaneous plans unless the agency has specifically contracted for industrial disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50 percent will become the non-industrial disability rate and 50 percent will become the industrial disability rate.

Service Retirement

Retirement rates vary by age, service, and formula, except for the safety ½ @ 55 and 2% @ 55 formulas, where retirement rates vary by age only.

Service Retirement

Public Agency Miscellaneous 1.5% @ 65

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.008	0.011	0.013	0.015	0.017	0.019
51	0.007	0.010	0.012	0.013	0.015	0.017
52	0.010	0.014	0.017	0.019	0.021	0.024
53	0.008	0.012	0.015	0.017	0.019	0.022
54	0.012	0.016	0.019	0.022	0.025	0.028
55	0.018	0.025	0.031	0.035	0.038	0.043
56	0.015	0.021	0.025	0.029	0.032	0.036
57	0.020	0.028	0.033	0.038	0.043	0.048
58	0.024	0.033	0.040	0.046	0.052	0.058
59	0.028	0.039	0.048	0.054	0.060	0.067
60	0.049	0.069	0.083	0.094	0.105	0.118
61	0.062	0.087	0.106	0.120	0.133	0.150
62	0.104	0.146	0.177	0.200	0.223	0.251
63	0.099	0.139	0.169	0.191	0.213	0.239
64	0.097	0.136	0.165	0.186	0.209	0.233
65	0.140	0.197	0.240	0.271	0.302	0.339
66	0.092	0.130	0.157	0.177	0.198	0.222
67	0.129	0.181	0.220	0.249	0.277	0.311
68	0.092	0.129	0.156	0.177	0.197	0.221
69	0.092	0.130	0.158	0.178	0.199	0.224
70	0.103	0.144	0.175	0.198	0.221	0.248

Public Agency Miscellaneous 2% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.010	0.013	0.015	0.018	0.019	0.021
51	0.009	0.011	0.014	0.016	0.017	0.019
52	0.011	0.014	0.017	0.020	0.022	0.024
53	0.010	0.012	0.015	0.017	0.020	0.021
54	0.015	0.019	0.023	0.025	0.029	0.031
55	0.022	0.029	0.035	0.040	0.045	0.049
56	0.018	0.024	0.028	0.033	0.036	0.040
57	0.024	0.032	0.038	0.043	0.049	0.053
58	0.027	0.036	0.043	0.049	0.055	0.061
59	0.033	0.044	0.054	0.061	0.068	0.076
60	0.056	0.077	0.092	0.105	0.117	0.130
61	0.071	0.097	0.118	0.134	0.149	0.166
62	0.117	0.164	0.198	0.224	0.250	0.280
63	0.122	0.171	0.207	0.234	0.261	0.292
64	0.114	0.159	0.193	0.218	0.244	0.271
65	0.150	0.209	0.255	0.287	0.321	0.358
66	0.114	0.158	0.192	0.217	0.243	0.270
67	0.141	0.196	0.238	0.270	0.301	0.337
68	0.103	0.143	0.174	0.196	0.219	0.245
69	0.109	0.153	0.185	0.209	0.234	0.261
70	0.117	0.162	0.197	0.222	0.248	0.277

Service Retirement

Public Agency Miscellaneous 2% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.018	0.021	0.025	0.027	0.031
51	0.012	0.014	0.017	0.020	0.021	0.025
52	0.013	0.017	0.019	0.023	0.025	0.028
53	0.015	0.020	0.023	0.027	0.030	0.034
54	0.026	0.033	0.038	0.045	0.051	0.059
55	0.048	0.061	0.074	0.088	0.100	0.117
56	0.042	0.053	0.063	0.075	0.085	0.100
57	0.044	0.056	0.067	0.081	0.091	0.107
58	0.049	0.062	0.074	0.089	0.100	0.118
59	0.057	0.072	0.086	0.103	0.118	0.138
60	0.067	0.086	0.103	0.123	0.139	0.164
61	0.081	0.103	0.124	0.148	0.168	0.199
62	0.116	0.147	0.178	0.214	0.243	0.288
63	0.114	0.144	0.174	0.208	0.237	0.281
64	0.108	0.138	0.166	0.199	0.227	0.268
65	0.155	0.197	0.238	0.285	0.325	0.386
66	0.132	0.168	0.203	0.243	0.276	0.328
67	0.122	0.155	0.189	0.225	0.256	0.304
68	0.111	0.141	0.170	0.204	0.232	0.274
69	0.114	0.144	0.174	0.209	0.238	0.282
70	0.130	0.165	0.200	0.240	0.272	0.323

Public Agency Miscellaneous 2.5% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.004	0.009	0.019	0.029	0.049	0.094
51	0.004	0.009	0.019	0.029	0.049	0.094
52	0.004	0.009	0.020	0.030	0.050	0.095
53	0.008	0.014	0.025	0.036	0.058	0.104
54	0.024	0.034	0.050	0.066	0.091	0.142
55	0.066	0.088	0.115	0.142	0.179	0.241
56	0.042	0.057	0.078	0.098	0.128	0.184
57	0.041	0.057	0.077	0.097	0.128	0.183
58	0.045	0.061	0.083	0.104	0.136	0.192
59	0.055	0.074	0.098	0.123	0.157	0.216
60	0.066	0.088	0.115	0.142	0.179	0.241
61	0.072	0.095	0.124	0.153	0.191	0.255
62	0.099	0.130	0.166	0.202	0.248	0.319
63	0.092	0.121	0.155	0.189	0.233	0.302
64	0.091	0.119	0.153	0.187	0.231	0.299
65	0.122	0.160	0.202	0.245	0.297	0.374
66	0.138	0.179	0.226	0.272	0.329	0.411
67	0.114	0.149	0.189	0.229	0.279	0.354
68	0.100	0.131	0.168	0.204	0.250	0.322
69	0.114	0.149	0.189	0.229	0.279	0.354
70	0.127	0.165	0.209	0.253	0.306	0.385

Service Retirement

Public Agency Miscellaneous 2.7% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.004	0.009	0.014	0.035	0.055	0.095
51	0.002	0.006	0.011	0.030	0.050	0.090
52	0.006	0.012	0.017	0.038	0.059	0.099
53	0.010	0.017	0.024	0.046	0.068	0.110
54	0.032	0.044	0.057	0.085	0.113	0.160
55	0.076	0.101	0.125	0.165	0.205	0.265
56	0.055	0.074	0.093	0.127	0.160	0.214
57	0.050	0.068	0.086	0.118	0.151	0.204
58	0.055	0.074	0.093	0.127	0.161	0.215
59	0.061	0.082	0.102	0.138	0.174	0.229
60	0.069	0.093	0.116	0.154	0.192	0.250
61	0.086	0.113	0.141	0.183	0.225	0.288
62	0.105	0.138	0.171	0.218	0.266	0.334
63	0.103	0.135	0.167	0.215	0.262	0.329
64	0.109	0.143	0.177	0.226	0.275	0.344
65	0.134	0.174	0.215	0.270	0.326	0.401
66	0.147	0.191	0.235	0.294	0.354	0.433
67	0.121	0.158	0.196	0.248	0.300	0.372
68	0.113	0.147	0.182	0.232	0.282	0.352
69	0.117	0.153	0.189	0.240	0.291	0.362
70	0.141	0.183	0.226	0.283	0.341	0.418

Public Agency Miscellaneous 3% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.012	0.018	0.024	0.039	0.040	0.091
51	0.009	0.014	0.019	0.034	0.034	0.084
52	0.014	0.020	0.026	0.043	0.044	0.096
53	0.016	0.023	0.031	0.048	0.050	0.102
54	0.026	0.036	0.045	0.065	0.070	0.125
55	0.043	0.057	0.072	0.096	0.105	0.165
56	0.042	0.056	0.070	0.094	0.103	0.162
57	0.049	0.065	0.082	0.108	0.119	0.180
58	0.057	0.076	0.094	0.122	0.136	0.199
59	0.076	0.100	0.123	0.157	0.175	0.244
60	0.114	0.148	0.182	0.226	0.255	0.334
61	0.095	0.123	0.152	0.190	0.214	0.288
62	0.133	0.172	0.211	0.260	0.294	0.378
63	0.129	0.166	0.204	0.252	0.285	0.368
64	0.143	0.185	0.226	0.278	0.315	0.401
65	0.202	0.260	0.318	0.386	0.439	0.542
66	0.177	0.228	0.279	0.340	0.386	0.482
67	0.151	0.194	0.238	0.292	0.331	0.420
68	0.139	0.179	0.220	0.270	0.306	0.391
69	0.190	0.245	0.299	0.364	0.414	0.513
70	0.140	0.182	0.223	0.274	0.310	0.396

Service Retirement

Public Agency Miscellaneous 2% @ 62						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.000	0.000	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000	0.000	0.000
52	0.010	0.013	0.016	0.019	0.022	0.024
53	0.013	0.017	0.020	0.024	0.027	0.031
54	0.021	0.027	0.033	0.039	0.045	0.050
55	0.044	0.056	0.068	0.080	0.092	0.104
56	0.030	0.039	0.047	0.055	0.063	0.072
57	0.036	0.046	0.056	0.066	0.076	0.086
58	0.046	0.059	0.072	0.085	0.097	0.110
59	0.058	0.074	0.089	0.105	0.121	0.137
60	0.062	0.078	0.095	0.112	0.129	0.146
61	0.062	0.079	0.096	0.113	0.129	0.146
62	0.097	0.123	0.150	0.176	0.202	0.229
63	0.089	0.113	0.137	0.162	0.186	0.210
64	0.094	0.120	0.145	0.171	0.197	0.222
65	0.129	0.164	0.199	0.234	0.269	0.304
66	0.105	0.133	0.162	0.190	0.219	0.247
67	0.105	0.133	0.162	0.190	0.219	0.247
68	0.105	0.133	0.162	0.190	0.219	0.247
69	0.105	0.133	0.162	0.190	0.219	0.247
70	0.125	0.160	0.194	0.228	0.262	0.296

Service Retirement

Public Agency Fire 1/2 @ 55 and 2% @ 55			
Age	Rate	Age	Rate
50	0.0159	56	0.1108
51	0.0000	57	0.0000
52	0.0344	58	0.0950
53	0.0199	59	0.0441
54	0.0413	60	1.00000
55	0.0751		

Public Agency Police 1/2 @ 55 and 2% @ 55			
Age	Rate	Age	Rate
50	0.0255	56	0.0692
51	0.0000	57	0.0511
52	0.0164	58	0.0724
53	0.0272	59	0.0704
54	0.0095	60	1.0000
55	0.1667		

Service Retirement

Public Agency Police 2% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.005	0.005	0.005	0.017	0.089
51	0.005	0.005	0.005	0.005	0.017	0.087
52	0.018	0.018	0.018	0.018	0.042	0.132
53	0.044	0.044	0.044	0.044	0.090	0.217
54	0.065	0.065	0.065	0.065	0.126	0.283
55	0.086	0.086	0.086	0.086	0.166	0.354
56	0.067	0.067	0.067	0.067	0.130	0.289
57	0.066	0.066	0.066	0.066	0.129	0.288
58	0.066	0.066	0.066	0.066	0.129	0.288
59	0.139	0.139	0.139	0.139	0.176	0.312
60	0.123	0.123	0.123	0.123	0.153	0.278
61	0.110	0.110	0.110	0.110	0.138	0.256
62	0.130	0.130	0.130	0.130	0.162	0.291
63	0.130	0.130	0.130	0.130	0.162	0.291
64	0.130	0.130	0.130	0.130	0.162	0.291
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 2% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.009	0.009	0.009	0.009	0.013	0.020
51	0.013	0.013	0.013	0.013	0.020	0.029
52	0.018	0.018	0.018	0.018	0.028	0.042
53	0.052	0.052	0.052	0.052	0.079	0.119
54	0.067	0.067	0.067	0.067	0.103	0.154
55	0.089	0.089	0.089	0.089	0.136	0.204
56	0.083	0.083	0.083	0.083	0.127	0.190
57	0.082	0.082	0.082	0.082	0.126	0.189
58	0.088	0.088	0.088	0.088	0.136	0.204
59	0.074	0.074	0.074	0.074	0.113	0.170
60	0.100	0.100	0.100	0.100	0.154	0.230
61	0.072	0.072	0.072	0.072	0.110	0.165
62	0.099	0.099	0.099	0.099	0.152	0.228
63	0.114	0.114	0.114	0.114	0.175	0.262
64	0.114	0.114	0.114	0.114	0.175	0.262
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 3% @ 55						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.004	0.004	0.004	0.004	0.015	0.086
51	0.014	0.014	0.014	0.014	0.034	0.114
52	0.026	0.026	0.026	0.026	0.060	0.154
53	0.038	0.038	0.038	0.038	0.083	0.188
54	0.071	0.071	0.071	0.071	0.151	0.292
55	0.061	0.061	0.061	0.061	0.131	0.261
56	0.072	0.072	0.072	0.072	0.153	0.295
57	0.065	0.065	0.065	0.065	0.140	0.273
58	0.066	0.066	0.066	0.066	0.142	0.277
59	0.118	0.118	0.118	0.118	0.247	0.437
60	0.065	0.065	0.065	0.065	0.138	0.272
61	0.084	0.084	0.084	0.084	0.178	0.332
62	0.108	0.108	0.108	0.108	0.226	0.405
63	0.084	0.084	0.084	0.084	0.178	0.332
64	0.084	0.084	0.084	0.084	0.178	0.332
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 3% @ 55						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.001	0.001	0.001	0.006	0.016	0.069
51	0.002	0.002	0.002	0.006	0.018	0.071
52	0.012	0.012	0.012	0.021	0.040	0.098
53	0.032	0.032	0.032	0.049	0.085	0.149
54	0.057	0.057	0.057	0.087	0.144	0.217
55	0.073	0.073	0.073	0.109	0.179	0.259
56	0.064	0.064	0.064	0.097	0.161	0.238
57	0.063	0.063	0.063	0.095	0.157	0.233
58	0.065	0.065	0.065	0.099	0.163	0.241
59	0.088	0.088	0.088	0.131	0.213	0.299
60	0.105	0.105	0.105	0.155	0.251	0.344
61	0.118	0.118	0.118	0.175	0.282	0.380
62	0.087	0.087	0.087	0.128	0.210	0.295
63	0.067	0.067	0.067	0.100	0.165	0.243
64	0.067	0.067	0.067	0.100	0.165	0.243
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 3% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.050	0.050	0.050	0.099	0.240	0.314
51	0.034	0.034	0.034	0.072	0.198	0.260
52	0.033	0.033	0.033	0.071	0.198	0.259
53	0.039	0.039	0.039	0.080	0.212	0.277
54	0.045	0.045	0.045	0.092	0.229	0.300
55	0.052	0.052	0.052	0.105	0.248	0.323
56	0.042	0.042	0.042	0.087	0.221	0.289
57	0.043	0.043	0.043	0.088	0.223	0.292
58	0.054	0.054	0.054	0.109	0.255	0.333
59	0.054	0.054	0.054	0.108	0.253	0.330
60	0.060	0.060	0.060	0.121	0.272	0.355
61	0.048	0.048	0.048	0.098	0.238	0.311
62	0.061	0.061	0.061	0.122	0.274	0.357
63	0.057	0.057	0.057	0.115	0.263	0.343
64	0.069	0.069	0.069	0.137	0.296	0.385
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 3% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.020	0.020	0.020	0.040	0.130	0.192
51	0.008	0.008	0.008	0.023	0.107	0.164
52	0.023	0.023	0.023	0.043	0.136	0.198
53	0.023	0.023	0.023	0.043	0.135	0.198
54	0.027	0.027	0.027	0.048	0.143	0.207
55	0.043	0.043	0.043	0.070	0.174	0.244
56	0.053	0.053	0.053	0.085	0.196	0.269
57	0.054	0.054	0.054	0.086	0.197	0.271
58	0.052	0.052	0.052	0.084	0.193	0.268
59	0.075	0.075	0.075	0.116	0.239	0.321
60	0.065	0.065	0.065	0.102	0.219	0.298
61	0.076	0.076	0.076	0.117	0.241	0.324
62	0.068	0.068	0.068	0.106	0.224	0.304
63	0.027	0.027	0.027	0.049	0.143	0.208
64	0.094	0.094	0.094	0.143	0.277	0.366
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 2% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.011	0.011	0.011	0.011	0.020	0.036
51	0.009	0.009	0.009	0.009	0.016	0.028
52	0.018	0.018	0.018	0.018	0.034	0.060
53	0.037	0.037	0.037	0.037	0.067	0.119
54	0.049	0.049	0.049	0.049	0.089	0.159
55	0.063	0.063	0.063	0.063	0.115	0.205
56	0.045	0.045	0.045	0.045	0.082	0.146
57	0.064	0.064	0.064	0.064	0.117	0.209
58	0.047	0.047	0.047	0.047	0.086	0.154
59	0.105	0.105	0.105	0.105	0.130	0.191
60	0.105	0.105	0.105	0.105	0.129	0.188
61	0.105	0.105	0.105	0.105	0.129	0.188
62	0.105	0.105	0.105	0.105	0.129	0.188
63	0.105	0.105	0.105	0.105	0.129	0.188
64	0.105	0.105	0.105	0.105	0.129	0.188
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 2% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.005	0.005	0.005	0.008	0.012
51	0.006	0.006	0.006	0.006	0.009	0.013
52	0.012	0.012	0.012	0.012	0.019	0.028
53	0.033	0.033	0.033	0.033	0.050	0.075
54	0.045	0.045	0.045	0.045	0.069	0.103
55	0.061	0.061	0.061	0.061	0.094	0.140
56	0.055	0.055	0.055	0.055	0.084	0.126
57	0.081	0.081	0.081	0.081	0.125	0.187
58	0.059	0.059	0.059	0.059	0.091	0.137
59	0.055	0.055	0.055	0.055	0.084	0.126
60	0.085	0.085	0.085	0.085	0.131	0.196
61	0.085	0.085	0.085	0.085	0.131	0.196
62	0.085	0.085	0.085	0.085	0.131	0.196
63	0.085	0.085	0.085	0.085	0.131	0.196
64	0.085	0.085	0.085	0.085	0.131	0.196
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 2.5% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.014	0.014	0.014	0.025	0.045
51	0.012	0.012	0.012	0.012	0.021	0.038
52	0.025	0.025	0.025	0.025	0.046	0.081
53	0.047	0.047	0.047	0.047	0.086	0.154
54	0.063	0.063	0.063	0.063	0.115	0.205
55	0.076	0.076	0.076	0.076	0.140	0.249
56	0.054	0.054	0.054	0.054	0.099	0.177
57	0.071	0.071	0.071	0.071	0.130	0.232
58	0.057	0.057	0.057	0.057	0.103	0.184
59	0.126	0.126	0.126	0.126	0.156	0.229
60	0.126	0.126	0.126	0.126	0.155	0.226
61	0.126	0.126	0.126	0.126	0.155	0.226
62	0.126	0.126	0.126	0.126	0.155	0.226
63	0.126	0.126	0.126	0.126	0.155	0.226
64	0.126	0.126	0.126	0.126	0.155	0.226
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 2.5% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.012	0.018
52	0.016	0.016	0.016	0.016	0.025	0.038
53	0.042	0.042	0.042	0.042	0.064	0.096
54	0.057	0.057	0.057	0.057	0.088	0.132
55	0.074	0.074	0.074	0.074	0.114	0.170
56	0.066	0.066	0.066	0.066	0.102	0.153
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.071	0.071	0.071	0.071	0.110	0.164
59	0.066	0.066	0.066	0.066	0.101	0.151
60	0.102	0.102	0.102	0.102	0.157	0.235
61	0.102	0.102	0.102	0.102	0.157	0.236
62	0.102	0.102	0.102	0.102	0.157	0.236
63	0.102	0.102	0.102	0.102	0.157	0.236
64	0.102	0.102	0.102	0.102	0.157	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 2.7% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0138	0.0138	0.0138	0.0138	0.0253	0.0451
51	0.0123	0.0123	0.0123	0.0123	0.0226	0.0402
52	0.0249	0.0249	0.0249	0.0249	0.0456	0.0812
53	0.0497	0.0497	0.0497	0.0497	0.0909	0.1621
54	0.0662	0.0662	0.0662	0.0662	0.1211	0.2160
55	0.0854	0.0854	0.0854	0.0854	0.1563	0.2785
56	0.0606	0.0606	0.0606	0.0606	0.1108	0.1975
57	0.0711	0.0711	0.0711	0.0711	0.1300	0.2318
58	0.0628	0.0628	0.0628	0.0628	0.1149	0.2049
59	0.1396	0.1396	0.1396	0.1396	0.1735	0.2544
60	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
61	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
62	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
63	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
64	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 2.7% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0065	0.0065	0.0065	0.0065	0.0101	0.0151
51	0.0081	0.0081	0.0081	0.0081	0.0125	0.0187
52	0.0164	0.0164	0.0164	0.0164	0.0254	0.0380
53	0.0442	0.0442	0.0442	0.0442	0.0680	0.1018
54	0.0606	0.0606	0.0606	0.0606	0.0934	0.1397
55	0.0825	0.0825	0.0825	0.0825	0.1269	0.1900
56	0.0740	0.0740	0.0740	0.0740	0.1140	0.1706
57	0.0901	0.0901	0.0901	0.0901	0.1387	0.2077
58	0.0790	0.0790	0.0790	0.0790	0.1217	0.1821
59	0.0729	0.0729	0.0729	0.0729	0.1123	0.1681
60	0.1135	0.1135	0.1135	0.1135	0.1747	0.2615
61	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
62	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
63	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
64	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Service Retirement

Age	Schools 2% @ 55					
	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.009	0.013	0.015	0.016	0.018
51	0.005	0.010	0.014	0.017	0.019	0.021
52	0.006	0.012	0.017	0.020	0.022	0.025
53	0.007	0.014	0.019	0.023	0.026	0.029
54	0.012	0.024	0.033	0.039	0.044	0.049
55	0.024	0.048	0.067	0.079	0.088	0.099
56	0.020	0.039	0.055	0.065	0.072	0.081
57	0.021	0.042	0.059	0.070	0.078	0.087
58	0.025	0.050	0.070	0.083	0.092	0.103
59	0.029	0.057	0.080	0.095	0.105	0.118
60	0.037	0.073	0.102	0.121	0.134	0.150
61	0.046	0.090	0.126	0.149	0.166	0.186
62	0.076	0.151	0.212	0.250	0.278	0.311
63	0.069	0.136	0.191	0.225	0.251	0.281
64	0.067	0.133	0.185	0.219	0.244	0.273
65	0.091	0.180	0.251	0.297	0.331	0.370
66	0.072	0.143	0.200	0.237	0.264	0.295
67	0.067	0.132	0.185	0.218	0.243	0.272
68	0.060	0.118	0.165	0.195	0.217	0.243
69	0.067	0.133	0.187	0.220	0.246	0.275
70	0.066	0.131	0.183	0.216	0.241	0.270

Miscellaneous

Internal Revenue Code Section 415

The limitations on benefits imposed by Internal Revenue Code Section 415 are taken into account in this valuation. Each year the impact of any changes in this limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. This results in lower contributions for those employers contributing to the Replacement Benefit Fund and protects CalPERS from prefunding expected benefits in excess of limits imposed by federal tax law.

Internal Revenue Code Section 401(a)(17)

The limitations on compensation imposed by Internal Revenue Code Section 401(a)(17) are taken into account in this valuation. Each year, the impact of any changes in the compensation limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. The compensation limit for classic members for the 2015 calendar year is \$265,000.

APPENDIX B

PRINCIPAL PLAN PROVISIONS

The following is a description of the principal plan provisions used in calculating costs and liabilities. We have indicated whether a plan provision is standard or optional. Standard benefits are applicable to all members while optional benefits vary among employers. Optional benefits that apply to a single period of time, such as Golden Handshakes, have not been included. Many of the statements in this summary are general in nature, and are intended to provide an easily understood summary of the Public Employees' Retirement Law. The law itself governs in all situations.

Service Retirement

Eligibility

A classic CalPERS member or PEPRA Safety member becomes eligible for Service Retirement upon attainment of age 50 with at least 5 years of credited service (total service across all CalPERS employers, and with certain other retirement systems with which CalPERS has reciprocity agreements). For employees hired into a plan with the 1.5 percent at 65 formula, eligibility for service retirement is age 55 with at least 5 years of service. PEPRA miscellaneous members become eligible for service retirement upon attainment of age 52 with at least 5 years of service.

Benefit

The service retirement benefit is a monthly allowance equal to the product of the *benefit factor*, *years of service*, and *final compensation*.

- The *benefit factor* depends on the benefit formula specified in your agency's contract. The table below shows the factors for each of the available formulas. Factors vary by the member's age at retirement. Listed are the factors for retirement at whole year ages:

Miscellaneous Plan Formulas

Retirement Age	1.5% at 65	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60	PEPRA 2% at 62
50	0.5000%	1.092%	1.426%	2.000%	2.000%	2.000%	N/A
51	0.5667%	1.156%	1.522%	2.100%	2.140%	2.100%	N/A
52	0.6334%	1.224%	1.628%	2.200%	2.280%	2.200%	1.000%
53	0.7000%	1.296%	1.742%	2.300%	2.420%	2.300%	1.100%
54	0.7667%	1.376%	1.866%	2.400%	2.560%	2.400%	1.200%
55	0.8334%	1.460%	2.000%	2.500%	2.700%	2.500%	1.300%
56	0.9000%	1.552%	2.052%	2.500%	2.700%	2.600%	1.400%
57	0.9667%	1.650%	2.104%	2.500%	2.700%	2.700%	1.500%
58	1.0334%	1.758%	2.156%	2.500%	2.700%	2.800%	1.600%
59	1.1000%	1.874%	2.210%	2.500%	2.700%	2.900%	1.700%
60	1.1667%	2.000%	2.262%	2.500%	2.700%	3.000%	1.800%
61	1.2334%	2.134%	2.314%	2.500%	2.700%	3.000%	1.900%
62	1.3000%	2.272%	2.366%	2.500%	2.700%	3.000%	2.000%
63	1.3667%	2.418%	2.418%	2.500%	2.700%	3.000%	2.100%
64	1.4334%	2.418%	2.418%	2.500%	2.700%	3.000%	2.200%
65	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.300%
66	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.400%
67 & up	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.500%

Safety Plan Formulas

Retirement Age	½ at 55 *	2% at 55	2% at 50	3% at 55	3% at 50
50	1.783%	1.426%	2.000%	2.400%	3.000%
51	1.903%	1.522%	2.140%	2.520%	3.000%
52	2.035%	1.628%	2.280%	2.640%	3.000%
53	2.178%	1.742%	2.420%	2.760%	3.000%
54	2.333%	1.866%	2.560%	2.880%	3.000%
55 & Up	2.500%	2.000%	2.700%	3.000%	3.000%

* For this formula, the benefit factor also varies by entry age. The factors shown are for members with an entry age of 35 or greater. If entry age is less than 35, then the age 55 benefit factor is 50 percent divided by the difference between age 55 and entry age. The benefit factor for ages prior to age 55 is the same proportion of the age 55 benefit factor as in the above table.

PEPRA Safety Plan Formulas

Retirement Age	2% at 57	2.5% at 57	2.7% at 57
50	1.426%	2.000%	2.000%
51	1.508%	2.071%	2.100%
52	1.590%	2.143%	2.200%
53	1.672%	2.214%	2.300%
54	1.754%	2.286%	2.400%
55	1.836%	2.357%	2.500%
56	1.918%	2.429%	2.600%
57 & Up	2.000%	2.500%	2.700%

- The *years of service* is the amount credited by CalPERS to a member while he or she is employed in this group (or for other periods that are recognized under the employer's contract with CalPERS). For a member who has earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance. An agency may contract for an optional benefit where any unused sick leave accumulated at the time of retirement will be converted to credited service at a rate of 0.004 years of service for each day of sick leave.
- The *final compensation* is the monthly average of the member's highest 36 or 12 consecutive months' full-time equivalent monthly pay (no matter which CalPERS employer paid this compensation). The standard benefit is 36 months. Employers had the option of providing a final compensation equal to the highest 12 consecutive months for classic plans only. Final compensation must be defined by the highest 36 consecutive months' pay under the 1.5% at 65 formula. PEPRA members have a cap on the annual salary that can be used to calculate final compensation for all new members based on the Social Security contribution and benefit base. For employees that participate in Social Security this cap is \$117,020 for 2015 and for those employees that do not participate in Social Security the cap for 2015 is \$140,424. Adjustments to the caps are permitted annually based on changes to the CPI for all urban consumers.
- Employees must be covered by Social Security with the 1.5% at 65 formula. Social Security is optional for all other benefit formulas. For employees covered by Social Security, the modified formula is the standard benefit. Under this type of formula, the final compensation is offset by \$133.33 (or by one third if the final compensation is less than \$400). Employers may contract for the full benefit with Social Security that will eliminate the offset applicable to the final compensation. For employees not covered by Social Security, the full benefit is paid with

no offsets. Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 if members are not covered by Social Security or \$513 if members are covered by Social Security.

- The miscellaneous and PEPRA safety service retirement benefit is not capped. The classic service retirement benefit is capped at 90 percent of final compensation.

Vested Deferred Retirement

Eligibility for Deferred Status

A CalPERS member becomes eligible for a deferred vested retirement benefit when he or she leaves employment, keeps his or her contribution account balance on deposit with CalPERS, **and** has earned at least 5 years of credited service (total service across all CalPERS employers, and with certain other retirement systems with which CalPERS has reciprocity agreements).

Eligibility to Start Receiving Benefits

The CalPERS classic members and PEPRA safety members become eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for deferred status and upon attainment of age 50 (55 for employees hired into a 1.5% @ 65 plan). PEPRA miscellaneous members become eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for deferred status and upon attainment of age 52.

Benefit

The vested deferred retirement benefit is the same as the service retirement benefit, where the benefit factor is based on the member's age at allowance commencement. For members who have earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance.

Non-Industrial (Non-Job Related) Disability Retirement

Eligibility

A CalPERS member is eligible for Non-Industrial Disability Retirement if he or she becomes *disabled* and has at least 5 years of credited service (total service across all CalPERS employers, and with certain other retirement systems with which CalPERS has reciprocity agreements). There is no special age requirement. *Disabled* means the member is unable to perform his or her job because of an illness or injury, which is expected to be permanent or to last indefinitely. The illness or injury does not have to be job related. A CalPERS member must be actively employed by any CalPERS employer at the time of disability in order to be eligible for this benefit.

Standard Benefit

The standard Non-Industrial Disability Retirement benefit is a monthly allowance equal to 1.8 percent of final compensation, multiplied by *service*, which is determined as follows:

- *Service* is CalPERS credited service, for members with less than 10 years of service or greater than 18.518 years of service; or
- *Service* is CalPERS credited service plus the additional number of years that the member would have worked until age 60, for members with at least 10 years but not more than 18.518 years of service. The maximum benefit in this case is 33 1/3 percent of final compensation.

Improved Benefit

Employers have the option of providing the improved Non-Industrial Disability Retirement benefit. This benefit provides a monthly allowance equal to 30 percent of final compensation for the first 5 years of service, plus 1 percent for each additional year of service to a maximum of 50 percent of final compensation.

Members who are eligible for a larger service retirement benefit may choose to receive that benefit in lieu of a disability benefit. Members eligible to retire, and who have attained the normal retirement age determined by their service retirement benefit formula, will receive the same dollar amount for disability retirement as that payable for service retirement. For members who have earned service with multiple CalPERS employers, the benefit attributed to each employer is the total disability allowance multiplied by the ratio of service with a particular employer to the total CalPERS service.

Industrial (Job Related) Disability Retirement

All safety members have this benefit. For miscellaneous members, employers have the option of providing this benefit. An employer may choose to provide the increased benefit option or the improved benefit option.

Eligibility

An employee is eligible for Industrial Disability Retirement if he or she becomes disabled while working, where disabled means the member is unable to perform the duties of the job because of a work-related illness or injury, which is expected to be permanent or to last indefinitely. A CalPERS member who has left active employment within this group is not eligible for this benefit, except to the extent described below.

Standard Benefit

The standard Industrial Disability Retirement benefit is a monthly allowance equal to 50 percent of final compensation.

Increased Benefit (75 percent of Final Compensation)

The increased Industrial Disability Retirement benefit is a monthly allowance equal to 75 percent final compensation for total disability.

Improved Benefit (50 percent to 90 percent of Final Compensation)

The improved Industrial Disability Retirement benefit is a monthly allowance equal to the Workman's Compensation Appeals Board permanent disability rate percentage (if 50 percent or greater, with a maximum of 90 percent) times the final compensation.

For a CalPERS member not actively employed in this group who became disabled while employed by some other CalPERS employer, the benefit is a return of accumulated member contributions with respect to employment in this group. With the standard or increased benefit, a member may also choose to receive the annuitization of the accumulated member contributions.

If a member is eligible for service retirement and if the service retirement benefit is more than the industrial disability retirement benefit, the member may choose to receive the larger benefit.

Post-Retirement Death Benefit

Standard Lump Sum Payment

Upon the death of a retiree, a one-time lump sum payment of \$500 will be made to the retiree's designated survivor(s), or to the retiree's estate.

Improved Lump Sum Payment

Employers have the option of providing an improved lump sum death benefit of \$600, \$2,000, \$3,000, \$4,000 or \$5,000.

Form of Payment for Retirement Allowance

Standard Form of Payment

Generally, the retirement allowance is paid to the retiree in the form of an annuity for as long as he or she is alive. The retiree may choose to provide for a portion of his or her allowance to be paid to any designated beneficiary after the retiree's death. CalPERS provides for a variety of such benefit options, which the retiree pays for by taking a reduction in his or her retirement allowance. Such reduction takes into account the amount to be provided to the beneficiary and the probable duration of payments (based on the ages of the member and beneficiary) made subsequent to the member's death.

Improved Form of Payment (Post-Retirement Survivor Allowance)

Employers have the option to contract for the post-retirement survivor allowance.

For retirement allowances with respect to service subject to the modified formula, 25 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. For retirement allowances with respect to service subject to the full or supplemental formula, 50 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. This additional benefit is referred to as post-retirement survivor allowance (PRSA) or simply as survivor continuance.

In other words, 25 percent or 50 percent of the allowance, the continuance portion, is paid to the retiree for as long as he or she is alive, and that same amount is continued to the retiree's spouse (or if no eligible spouse, to unmarried child(ren) until they attain age 18; or, if no eligible child(ren), to a qualifying dependent parent) for the rest of his or her lifetime. This benefit will not be discontinued in the event the spouse remarries.

The remaining 75 percent or 50 percent of the retirement allowance, which may be referred to as the option portion of the benefit, is paid to the retiree as an annuity for as long as he or she is alive. Or, the retiree may choose to provide for some of this option portion to be paid to any designated beneficiary after the retiree's death. Benefit options applicable to the option portion are the same as those offered with the standard form. The reduction is calculated in the same manner but is applied only to the option portion.

Pre-Retirement Death Benefits

Basic Death Benefit

This is a standard benefit.

Eligibility

An employee's beneficiary (or estate) may receive the basic death benefit if the member dies while actively employed. A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this basic death benefit.

Benefit

The basic death benefit is a lump sum in the amount of the member's accumulated contributions, where interest is currently credited at 7.5 percent per year, plus a lump sum in the amount of one month's salary for each completed year of current service, up to a maximum of six months' salary. For purposes of this benefit, one month's salary is defined as the member's average monthly full-time rate of compensation during the 12 months preceding death.

1957 Survivor Benefit

This is a standard benefit.

Eligibility

An employee's *eligible survivor(s)* may receive the 1957 Survivor benefit if the member dies while actively employed, has attained at least age 50 for classic and safety PEPRA members and age 52 for miscellaneous PEPRA members, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other retirement systems with which CalPERS has reciprocity agreements). A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. An eligible survivor means the surviving spouse to whom the member was married at least one year before death or, if there is no eligible spouse, to the member's unmarried child(ren) under age 18. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this 1957 Survivor benefit.

Benefit

The 1957 Survivor benefit is a monthly allowance equal to one-half of the unmodified service retirement benefit that the member would have been entitled to receive if the member had retired on the date of his or her death. If the benefit is payable to the spouse, the benefit is discontinued upon the death of the spouse. If the benefit is payable to dependent child(ren), the benefit will be discontinued upon death or attainment of age 18, unless the child(ren) is disabled. The total amount paid will be at least equal to the basic death benefit.

Optional Settlement 2W Death Benefit

This is an optional benefit.

Eligibility

An employee's *eligible survivor* may receive the Optional Settlement 2W Death benefit if the member dies while actively employed, has attained at least age 50 for classic and safety PEPRA members and age 52 for miscellaneous PEPRA members, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other retirement systems with which CalPERS has reciprocity agreements). A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married at least one year before death. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Optional Settlement 2W Death benefit.

Benefit

The Optional Settlement 2W Death benefit is a monthly allowance equal to the service retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried child(ren) under age 18, if applicable. The total amount paid will be at least equal to the basic death benefit.

Special Death Benefit

This is a standard benefit for safety members. An employer may elect to provide this benefit for miscellaneous members.

Eligibility

An employee's *eligible survivor(s)* may receive the special death benefit if the member dies while actively employed and the death is job-related. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried child(ren) under age 22. An eligible survivor who chooses to receive this benefit will not receive any other death benefit.

Benefit

The special death benefit is a monthly allowance equal to 50 percent of final compensation, and will be increased whenever the compensation paid to active employees is increased but ceasing to increase when the member would have attained age 50. The allowance is payable to the surviving spouse until death at which time the allowance is continued to any unmarried child(ren) under age 22. There is a guarantee that the total amount paid will at least equal the basic death benefit.

If the member's death is the result of an accident or injury caused by external violence or physical force incurred in the performance of the member's duty, and there are *eligible* surviving child(ren) (*eligible* means unmarried child(ren) under age 22) in addition to an eligible spouse, then an **additional monthly allowance** is paid equal to the following:

- if 1 eligible child: 12.5 percent of final compensation
- if 2 eligible children: 20.0 percent of final compensation
- if 3 or more eligible children: 25.0 percent of final compensation

Alternate Death Benefit for Local Fire Members

This is an optional benefit available only to local fire members.

Eligibility

An employee's *eligible survivor(s)* may receive the alternate death benefit in lieu of the basic death benefit or the 1957 Survivor benefit if the member dies while actively employed and has at least 20 years of total CalPERS service. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried child(ren) under age 18.

Benefit

The Alternate Death benefit is a monthly allowance equal to the service retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) If the member has not yet attained age 50, the benefit is equal to that which would be payable if the member had retired at age 50, based on service credited at the time of death. The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried child(ren) under age 18, if applicable. The total amount paid will be at least equal to the basic death benefit.

Cost-of-Living Adjustments (COLA)

Standard Benefit

Retirement and survivor allowances are adjusted each year in May for cost of living, beginning the second calendar year after the year of retirement. The standard cost-of-living adjustment (COLA) is 2 percent. Annual adjustments are calculated by first determining the lesser of 1) 2 percent compounded from the end of the year of retirement or 2) actual rate of inflation. The resulting increase is divided by the total increase provided in prior years. For any particular year, the COLA adjustment may be less than 2 percent (when the rate of inflation is low), may be greater than the rate of inflation (when the rate of inflation is low after several years of high inflation) or may even be greater than 2 percent (when inflation is high after several years of low inflation).

Improved Benefit

Employers have the option of providing a COLA of 3 percent, 4 percent, or 5 percent, determined in the same manner as described above for the standard 2 percent COLA. An improved COLA is not available with the 1.5% at 65 formula.

Purchasing Power Protection Allowance (PPPA)

Retirement and survivor allowances are protected against inflation by PPPA. PPPA benefits are cost-of-living adjustments that are intended to maintain an individual's allowance at 80 percent of the initial allowance at retirement adjusted for inflation since retirement. The PPPA benefit will be coordinated with other cost-of-living adjustments provided under the plan.

Employee Contributions

Each employee contributes toward his or her retirement based upon the retirement formula. The standard employee contribution is as described below.

- The percent contributed below the monthly compensation breakpoint is 0 percent.
- The monthly compensation breakpoint is \$0 for full and supplemental formula members and \$133.33 for employees covered by the modified formula.
- The percent contributed above the monthly compensation breakpoint depends upon the benefit formula, as shown in the table below.

Benefit Formula	Percent Contributed above the Breakpoint
Miscellaneous, 1.5% at 65	2%
Miscellaneous, 2% at 60	7%
Miscellaneous, 2% at 55	7%
Miscellaneous, 2.5% at 55	8%
Miscellaneous, 2.7% at 55	8%
Miscellaneous, 3% at 60	8%
Miscellaneous, 2% at 62	50% of the Total Normal Cost
Miscellaneous, 1.5% at 65	50% of the Total Normal Cost
Safety, 1/2 at 55	Varies by entry age
Safety, 2% at 55	7%
Safety, 2% at 50	9%
Safety, 3% at 55	9%
Safety, 3% at 50	9%
Safety, 2% at 57	50% of the Total Normal Cost
Safety, 2.5% at 57	50% of the Total Normal Cost
Safety, 2.7% at 57	50% of the Total Normal Cost

The employer may choose to "pick-up" these contributions for classic members (Employer Paid Member Contributions or EPMC). EPMC is prohibited for new PEPRAs members.

An employer may also include Employee Cost Sharing in the contract, where employees agree to share the cost of the employer contribution. These contributions are paid in addition to the member contribution.

Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 and the contribution rate is 6 percent if members are not covered by Social Security. If members are covered by Social Security, the offset is \$513 and the contribution rate is 5 percent.

Refund of Employee Contributions

If the member's service with the employer ends, and if the member does not satisfy the eligibility conditions for any of the retirement benefits above, the member may elect to receive a refund of his or her employee contributions, which are credited with 6 percent interest compounded annually.

1959 Survivor Benefit

This is a pre-retirement death benefit available only to members not covered by Social Security. Any agency joining CalPERS subsequent to 1993 is required to provide this benefit if the members are not covered by Social Security. The benefit is optional for agencies joining CalPERS prior to 1994. Levels 1, 2 and 3 are now closed. Any new agency or any agency wishing to add this benefit or increase the current level may only choose the 4th or Indexed Level.

This benefit is not included in the results presented in this valuation. More information on this benefit is available on the CalPERS website at www.calpers.ca.gov.

APPENDIX C

PARTICIPANT DATA

- **SUMMARY OF VALUATION DATA**
- **ACTIVE MEMBERS**
- **TRANSFERRED AND TERMINATED MEMBERS**
- **RETIRED MEMBERS AND BENEFICIARIES**

Summary of Valuation Data

	June 30, 2014	June 30, 2015
1. Active Members		
a) Counts	107	112
b) Average Attained Age	44.73	45.48
c) Average Entry Age to Rate Plan	32.81	33.66
d) Average Years of Service	11.92	11.82
e) Average Annual Covered Pay	\$ 77,860	\$ 80,913
f) Annual Covered Payroll	8,331,071	9,062,236
g) Projected Annual Payroll for Contribution Year	9,103,586	9,902,550
h) Present Value of Future Payroll	63,808,706	68,822,382
2. Transferred Members		
a) Counts	91	92
b) Average Attained Age	46.00	46.29
c) Average Years of Service	3.33	2.91
d) Average Annual Covered Pay	\$ 103,916	\$ 106,061
3. Terminated Members		
a) Counts	83	88
b) Average Attained Age	42.01	41.70
c) Average Years of Service	3.11	3.27
d) Average Annual Covered Pay	\$ 51,069	\$ 46,313
4. Retired Members and Beneficiaries		
a) Counts	174	176
b) Average Attained Age	68.68	69.21
c) Average Annual Benefits	\$ 28,658	\$ 29,024
5. Active to Retired Ratio [(1a) / (4a)]	0.61	0.64

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Average Annual Benefits represents benefit amounts payable by this plan only. Some members may have service with another agency and would therefore have a larger total benefit than would be included as part of the average shown here.

Active Members

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Distribution of Active Members by Age and Service

Attained Age	Years of Service at Valuation Date						Total
	0-4	5-9	10-14	15-19	20-25	25+	
15-24	7	0	0	0	0	0	7
25-29	4	0	0	0	0	0	4
30-34	5	2	1	0	0	0	8
35-39	6	0	8	3	0	0	17
40-44	4	1	5	3	2	0	15
45-49	4	4	3	5	3	0	19
50-54	1	4	4	5	1	3	18
55-59	3	2	4	2	1	3	15
60-64	0	1	2	4	0	0	7
65 and over	0	0	0	1	0	1	2
All Ages	34	14	27	23	7	7	112

Distribution of Average Annual Salaries by Age and Service

Attained Age	Years of Service at Valuation Date						Average
	0-4	5-9	10-14	15-19	20-25	25+	
15-24	\$31,507	\$0	\$0	\$0	\$0	\$0	\$31,507
25-29	46,334	0	0	0	0	0	46,334
30-34	78,060	81,502	68,529	0	0	0	77,729
35-39	78,724	0	76,151	88,217	0	0	79,189
40-44	83,141	94,907	76,730	82,575	115,110	0	85,938
45-49	80,614	73,408	109,468	98,786	74,330	0	87,443
50-54	66,193	115,252	94,690	90,042	80,760	118,696	99,612
55-59	29,783	82,413	86,925	74,458	216,036	92,528	82,961
60-64	0	24,838	127,068	58,208	0	0	73,115
65 and over	0	0	0	156,468	0	32,128	94,298
All Ages	\$61,150	\$85,873	\$87,792	\$86,727	\$107,144	\$95,114	\$80,913

Transferred and Terminated Members

Distribution of Transfers to Other CalPERS Plans by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	0	0	0	0	0	0	0	\$0
25-29	4	0	0	0	0	0	4	104,705
30-34	6	0	0	0	0	0	6	102,166
35-39	16	0	0	0	0	0	16	119,886
40-44	17	1	0	0	0	0	18	103,136
45-49	14	1	0	0	0	0	15	108,307
50-54	13	2	3	0	0	0	18	98,444
55-59	4	3	3	0	0	0	10	114,986
60-64	1	0	0	0	0	0	1	43,555
65 and over	3	0	0	0	1	0	4	90,294
All Ages	78	7	6	0	1	0	92	106,061

Distribution of Terminated Participants with Funds on Deposit by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	3	0	0	0	0	0	3	\$26,633
25-29	15	0	0	0	0	0	15	27,389
30-34	14	1	0	0	0	0	15	28,332
35-39	6	1	0	0	0	0	7	52,418
40-44	8	2	0	0	0	0	10	51,735
45-49	9	2	3	1	0	0	15	69,065
50-54	1	3	3	0	1	0	8	69,030
55-59	5	3	0	0	0	0	8	54,048
60-64	5	0	0	0	0	0	5	36,840
65 and over	2	0	0	0	0	0	2	35,377
All Ages	68	12	6	1	1	0	88	46,313

Retired Members and Beneficiaries

Distribution of Retirees and Beneficiaries by Age and Retirement Type*

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0
40-44	0	0	2	0	0	0	2
45-49	0	0	3	0	0	0	3
50-54	3	0	3	1	0	0	7
55-59	21	1	0	0	0	1	23
60-64	21	0	4	0	0	1	26
65-69	32	3	0	0	0	0	35
70-74	28	2	0	0	0	0	30
75-79	20	0	1	0	0	0	21
80-84	11	0	0	0	0	2	13
85 and Over	13	0	0	0	0	3	16
All Ages	149	6	13	1	0	7	176

Distribution of Average Annual Amounts for Retirees and Beneficiaries by Age and Retirement Type*

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 30	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30-34	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0
40-44	0	0	324	0	0	0	324
45-49	0	0	319	0	0	0	319
50-54	1,104	0	1,213	82,865	0	0	12,831
55-59	27,453	5,775	0	0	0	17,026	26,058
60-64	25,178	0	3,912	0	0	18,393	21,646
65-69	45,096	19,953	0	0	0	0	42,941
70-74	34,627	12,662	0	0	0	0	33,162
75-79	20,500	0	2,241	0	0	0	19,630
80-84	47,531	0	0	0	0	51,337	48,117
85 and Over	21,772	0	0	0	0	12,061	19,951
All Ages	\$31,792	\$15,159	\$1,779	\$82,865	\$0	\$24,897	\$29,024

Retired Members and Beneficiaries (continued)

Distribution of Retirees and Beneficiaries by Years Retired and Retirement Type*

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	35	0	2	1	0	0	38
5-9	41	0	4	0	0	3	48
10-14	29	2	3	0	0	2	36
15-19	16	1	1	0	0	1	19
20-24	19	3	1	0	0	0	23
25-29	5	0	2	0	0	1	8
30 and Over	4	0	0	0	0	0	4
All Years	149	6	13	1	0	7	176

Distribution of Average Annual Amounts for Retirees and Beneficiaries by Years Retired and Retirement Type*

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 5 Yrs	\$29,661	\$0	\$5,334	\$82,865	\$0	\$0	\$29,781
5-9	36,229	0	1,782	0	0	16,111	32,101
10-14	39,987	15,059	285	0	0	51,337	35,924
15-19	26,818	19,043	2,241	0	0	17,026	24,600
20-24	28,064	13,932	2,023	0	0	0	25,088
25-29	15,049	0	107	0	0	6,242	10,213
30 and Over	4,101	0	0	0	0	0	4,101
All Years	\$31,792	\$15,159	\$1,779	\$82,865	\$0	\$24,897	\$29,024

* Counts of members do not include alternate payees receiving benefits while the member is still working. Therefore, the total counts may not match information on page 25 of the report. Multiple records may exist for those who have service in more than one coverage group. This does not result in double counting of liabilities.

APPENDIX D

**DEVELOPMENT OF PEPRA MEMBER CONTRIBUTION
RATES**

Development of PEPRA Members Contribution Rates

The table below shows the determination of the Member contribution rates based on 50 percent of the Total Normal Cost for each respective plan on June 30, 2015.

Assembly Bill (AB) 340 created PEPRA that implemented new benefit formulas and a final compensation period as well as new contribution requirements for new employees. In accordance with Section Code 7522.30(b), "new members ... shall have an initial contribution rate of at least 50 percent of the normal cost rate." The normal cost for the plan is dependent on the benefit levels, actuarial assumptions and demographics of the plan particularly the entry age into the plan. The PEPRA total normal cost for the plan is calculated assuming the entire active population, including classic members, is subject to the adopted PEPRA formula and applicable compensation limits. Should the total normal cost of the plan change by one percent or more from the base total normal cost established for the plan, the new member rate shall be 50% of the new normal cost rounded up to the next highest quarter percent.

Rate Plan Identifier	Plan	Basis for Current Rate		Rates Effective July 1, 2017			
		Total Normal Cost	Member Rate	Total Normal Cost	Change	Change Needed	Member Rate
26323	Miscellaneous PEPRA	12.500%	6.250%	11.806%	(0.694%)	No	6.250%

APPENDIX E

GLOSSARY OF ACTUARIAL TERMS

Glossary of Actuarial Terms

Accrued Liability (*also called Actuarial Accrued Liability or Entry Age Normal Accrued Liability*)

The total dollars needed as of the valuation date to fund all benefits earned in the past for *current* members.

Actuarial Assumptions

Assumptions made about certain events that will affect pension costs. Assumptions generally can be broken down into two categories: demographic and economic. Demographic assumptions include such things as mortality, disability and retirement rates. Economic assumptions include discount rate, salary growth and inflation.

Actuarial Methods

Procedures employed by actuaries to achieve certain funding goals of a pension plan. Actuarial methods include funding method, setting the length of time to fund the Accrued Liability and determining the Value of Assets.

Actuarial Valuation

The determination, as of a valuation date of the Normal Cost, Accrued liability, and related actuarial present values for a pension plan. These valuations are performed annually or when an employer is contemplating a change to their plan provisions.

Amortization Bases

Separate payment schedules for different portions of the Unfunded Liability. The total Unfunded Liability of a Risk Pool or non-pooled plan can be segregated by "cause," creating "bases" and each such base will be separately amortized and paid for over a specific period of time. However, all bases are amortized using investment and payroll assumptions from the current valuation. This can be likened to a home having a first mortgage of 24 years remaining payments and a second mortgage that has 10 years remaining payments. Each base or each mortgage note has its own terms (payment period, principal, etc.)

Generally, in an actuarial valuation, the separate bases consist of changes in unfunded liability due to contract amendments, actuarial assumption changes, actuarial methodology changes, and/or gains and losses. Payment periods are determined by Board policy and vary based on the cause of the change.

Amortization Period

The number of years required to pay off an Amortization Base.

Classic Member (under PEPR)

A classic member is a member who joined CalPERS prior to January, 1, 2013 and who is not defined as a new member under PEPR. (See definition of new member below)

Discount Rate Assumption

The actuarial assumption that was called "investment return" in earlier CalPERS reports or "actuarial interest rate" in Section 20014 of the California Public Employees' Retirement Law (PERL).

Entry Age

The earliest age at which a plan member begins to accrue benefits under a defined benefit pension plan. In most cases, this is the age of the member on their date of hire.

Entry Age Normal Cost Method

An actuarial cost method designed to fund a member's total plan benefit over the course of his or her career. This method is designed to yield a rate expressed as a level percentage of payroll.

(The assumed retirement age less the entry age is the amount of time required to fund a member's total benefit. Generally, the older a member on the date of hire, the greater the entry age normal cost. This is mainly because there is less time to earn investment income to fund the future benefits.)

Fresh Start

A Fresh Start is when multiple amortization bases are collapsed to one base and amortized together over a new funding period.

Funded Status

A measure of how well funded, or how "on track" a plan or risk pool is with respect to assets versus accrued liabilities. A ratio greater than 100% means the plan or risk pool has more assets than liabilities and a ratio less than 100% means liabilities are greater than assets.

GASB 68

Statement No. 68 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting and financial reporting for pensions. GASB 68 replaces GASB 27 effective the first fiscal year beginning after June 15, 2014.

New Member (under PEPRA)

A new member includes an individual who becomes a member of a public retirement system for the first time on or after January 1, 2013, and who was not a member of another public retirement system prior to that date, and who is not subject to reciprocity with another public retirement system.

Normal Cost

The annual cost of service accrual for the upcoming fiscal year for active employees. The normal cost should be viewed as the long term contribution rate.

Pension Actuary

A business professional that is authorized by the Society of Actuaries, and the American Academy of Actuaries to perform the calculations necessary to properly fund a pension plan.

PEPRA

The California Public Employees' Pension Reform Act of 2013

Prepayment Contribution

A payment made by the employer to reduce or eliminate the year's required employer contribution.

Present Value of Benefits (PVB)

The total dollars needed as of the valuation date to fund all benefits earned in the past or expected to be earned in the future for *current* members.

Superfunded

A condition existing when a plan's Actuarial Value of Assets exceeds its Present Value of Benefits. Prior to the passage of PEPRA, when this condition existed on a given valuation date for a given plan, employee contributions for the rate year covered by that valuation could be waived.

Unfunded Liability (UAL)

When a plan or pool's Value of Assets is less than its Accrued Liability, the difference is the plan or pool's Unfunded Liability. If the Unfunded Liability is positive, the plan or pool will have to pay contributions exceeding the Normal Cost.



City of Newark

MEMO

DATE: January 17, 2017
TO: City Council
FROM: Sheila Harrington, City Clerk *S-H*
SUBJECT: Approval of Audited Demands for the City Council Meeting of January 26, 2017.

REGISTER OF AUDITED DEMANDS

Bank of America General Checking Account

<u>Check Date</u>		<u>Check Numbers</u>	
January 05, 2017	Page 1-2	109879 to 109971	Inclusive
January 09, 2017	Page 1	109972	Inclusive
January 12, 2016	Page 1-2	109973 to 110047	Inclusive



City of Newark

MEMO

DATE: January 17, 2017
TO: Sheila Harrington, City Clerk
FROM: Susie Woodstock, Administrative Services Director *SW*
SUBJECT: Approval of Audited Demands for the City Council Meeting of January 26, 2017.

The attached list of Audited Demands is accurate and there are sufficient funds for payment.

1

Final Disbursement List. Check Date 01/05/17, Due Date 01/16/17, Discount Date 01/16/17. Computer Checks.

Bank 1001 US BANK

MICR Check#	Vendor Number	Payee	Check Date	Check Amount	Description
109879	10658	4LEAF INC	01/05/17	12,920.00	BLDG INSPECTION SERVICES
109880	10449	AFLAC ATTN: REMITTANCE PROCESSING SERVIC	01/05/17	1,557.58	PAYROLL - SHORT TERM DISABILITY PREMIUM
109881	287	ALAMEDA COUNTY SHERIFF'S OFFICE GREGORY	01/05/17	1,432.85	CRIME LAB FEES
109882	5821	ALL CITY MANAGEMENT SERVICES, INC	01/05/17	5,001.75	CROSSING GUARD SVCS 11/20-12/03/16
109883	12	ALLIED AUTO STORES INC	01/05/17	1,110.50	AUTO SUPPLIES
109884	1078	AMERICAN STAGE TOURS ATTN CHARTER SALES	01/05/17	2,184.00	SCROOGE IN LOVE TRIP 12/17/16
109885	348	AT&T	01/05/17	113.55	MONTHLY TELECOM DEC'16
109886	1085	AT&T	01/05/17	39.50	LONG DISTANCE DEC'16
109887	11045	BAXTERS FRAME WORKS AND BADGE FRAME	01/05/17	1,421.51	PROJECT 1151 - PATROL ANNEX WORK STATION
109888	7784	BRIAN SCOTT PRODUCTIONS	01/05/17	375.00	SENIOR CENTER ENTERTAINMENT
109889	9888	BUREAU VERITAS NORTH AMERICA INC.	01/05/17	33,609.76	BLDG PLAN REVIEW SERVICES
109890	33	CENTRAL TOWING & TRANSPORT LLC	01/05/17	65.00	TOWING SVCS
109891	214	CENTRAL VETERINARY HOSPITAL	01/05/17	232.50	VET SVCS
109892	458	CHEVRON AND TEXACO BUSINESS CARD SERVICE	01/05/17	648.47	FUEL CHARGES
109893	163	CHILDREN'S HOSPITAL - OAKLAND	01/05/17	662.00	VICTIM MEDICAL EXAMS PD#16-02298
109894	11462	TONYA CONNOLLY	01/05/17	108.36	EXPENSE REIMBURSEMENT
109895	11211	ROBERT COSTA	01/05/17	180.00	EXPENSE REIMBURSEMENT
109896	1109	CAPITAL ONE COMMERCIAL	01/05/17	877.37	SUPPLIES
109897	242	CROP PRODUCTION SERVICES	01/05/17	5,759.70	PROJECT 1138 - PARK RENOVATION
109898	10650	CITY OF FREMONT POLICE S.A.C.N.E.T.	01/05/17	13,109.00	REFUND OF MONEY
109899	10649	LUCY K. PAGAN DOROTHY TELLEZ	01/05/17	1,000.00	PERFORMANCE BOND RTN EP# 2016-0314
109900	10649	JOSE RAFAEL GUZMAN TRUST	01/05/17	1,000.00	PERFORMANCE BOND RTN EP# 2015-0093
109901	10649	VICTORIA L. DUBOCE	01/05/17	1,000.00	PERFORMANCE BOND RTN EP# 2015-321
109902	10649	BELLARMINA MIJARES	01/05/17	1,000.00	PERFORMANCE BOND RTN EP# 2015-0049
109903	10793	GUADALUPE MARTINEZ	01/05/17	200.00	RENTAL DEPOSIT REFUND MINUS EXTRA HR
109904	10793	INSYNCEKATHAK DANCE SCHOOL	01/05/17	300.00	RENTAL DEPOSIT REFUND
109905	10793	ERICKA DE LA TORRE	01/05/17	114.00	RENTAL DEPOSIT REFUND DISCOUNT FOR POOL
109906	10793	ATIN GUPTA	01/05/17	136.00	PARTY DEPOSIT REFUND PLUS DISCOUNT FOR P
109907	63	THE GOODYEAR TIRE & RUBBER CO	01/05/17	1,110.28	TIRE PURCHASE
109908	7631	DELTA DENTAL	01/05/17	7,230.39	PAYROLL - DENTAL PREMIUM JAN'17
109909	7641	DELTA DENTAL INSURANCE COMPANY ATTN: ACC	01/05/17	434.31	PAYROLL - DENTAL PREMIUM JAN'17
109910	7183	DEMARAY'S GYMNASTICS ACADEMY	01/05/17	925.60	RECREATION CONTRACT
109911	3728	DEPARTMENT OF JUSTICE ACCOUNTING OFFICE	01/05/17	64.00	FINGERPRINTING FEES
109912	2135	DEPARTMENT OF INDUSTRIAL RELATIONS OFFIC	01/05/17	39,669.26	WORKER'S COMPENSATION ADMINISTRATION REV
109913	3130	DOWNTOWN FORD SALES	01/05/17	24,349.49	PROJECT 1149 NEW VEHICLES FOR BUILDING &
109914	11404	ALHAMBRA	01/05/17	507.77	WATER SERVICE
109915	9511	DWYS LLC DBA RENAISSANCE TOTS, LLC ATTN	01/05/17	336.00	RECREATION CONTRACT
109916	310	EQUIFAX INFORMATION SVCS LLC	01/05/17	52.10	CREDIT BUREAU REPORTS
109917	7663	FIDELITY SECURITY LIFE INSURANCE/EYEMED	01/05/17	725.76	VISION PREMIUM
109918	522	FEDEX	01/05/17	178.09	PACKAGE DELIVERY
109919	11314	FH DAILEY CHEVROLET	01/05/17	9.71	GENERAL MOTORS PARTS & SERVICE
109920	1733	FIRST BAPTIST CHURCH	01/05/17	80.00	PAYROLL DEDUCTION - DONATION DEC'16
109921	1120	FORENSIC ANALYTICAL SCIENCES, INC	01/05/17	375.00	LAB TESTS
109922	5137	FOUR SEASONS POOL SERVICE	01/05/17	169.80	COMMUNITY PARK WADING POOL COVER
109923	5106	CITY OF FREMONT REVENUE DIVISION	01/05/17	8,138.30	SHELTER OPERATING EXPS
109924	11112	FREMONT CHRYSLER DODGE JEEP RAM	01/05/17	54.84	AUTO REPAIRS/SERVICE
109925	313	FREMONT URGENT CARE CENTER	01/05/17	1,692.00	PRE-EMPLOYMENT/DOT PHYSICALS
109926	10983	G BORTOLOTTO & CO INC	01/05/17	5,985.00	CIP PROJECT #1116 (2016 ASPHALT CONCRETE
109927	3416	GAMETIME	01/05/17	7,852.89	PROJECT 1110 - PARK RENOVATION
109928	11157	JASON GERMANO	01/05/17	200.00	RESERVE UNIF ALLOWANCE
109929	3638	MARK GOTHARD	01/05/17	4,377.10	RECREATION CONTRACT

Final Disbursement List. Check Date 01/05/17, Due Date 01/16/17, Discount Date 01/16/17. Computer Checks.
 Bank 1001 US BANK

MICR Check#	Vendor Number	Payee	Check Date	Check Amount	Description
109930	10655	GRANITEROCK	01/05/17	1,689.50	ASPHALT PRODUCTS
109931	2270	KELLY HESS	01/05/17	26.60	EXPENSE REIMBURSEMENT
109932	1591	PHILIP H HOLLAND	01/05/17	200.00	RESERVE UNIF ALLOWANCE
109933	7593	BRUCE HOWCROFT	01/05/17	200.00	RESERVE UNIF ALLOWANCE
109934	187	INDUSTRIAL SAFETY SUPPLY	01/05/17	107.09	SAFETY SUPPLIES
109935	11389	ISH AMITJ KOUR	01/05/17	4,881.60	RECREATION CONTRACT
109936	4064	ADECELI KOVACH	01/05/17	84.08	EXPENSE REIMBURSEMENT
109937	293	LANGUAGE LINE SERVICES INC	01/05/17	487.38	INTERPRETATION SVCS
109938	10298	MANAGED HEALTH NETWORK BANK OF AMERICA	01/05/17	384.40	ANNUAL PO FOR EMPLOYEE ASSISTANCE PROGRA
109939	7618	METLIFE SBC	01/05/17	1,837.40	PAYROLL - LONG TERM DISABILITY PREMIUM
109940	11357	MISSION UNIFORM SERVICE	01/05/17	2,259.23	UNIFORMS, TOWELS & MATS
109941	6	KAREN MORAIDA	01/05/17	26.81	EXPENSE REIMBURSEMENT
109942	7335	MUNICIPAL MAINTENANCE EQUIPMENT INC	01/05/17	37.21	SWEEPER/CATCH BASIN CLEANER SERVICE & PA
109943	327	OCCU-MED, LTD. FEDERAL TAX ID# 52-233351	01/05/17	120.00	PRE-EMPLOYMENT PHYSICALS
109944	2027	PACHECO BROTHERS GARDENING, INC.	01/05/17	911.00	LANDSCAPE REPAIRS
109945	349	PACIFIC GAS & ELECTRIC	01/05/17	65,373.90	GAS & ELECTRIC CHARGES
109946	78	PERFORMANCE PEST MANAGEMENT LPC SERVICES	01/05/17	529.00	PEST CONTROL
109947	11346	PHAN'S SMOG STATION	01/05/17	800.00	VEHICLE SMOG CHECK
109948	329	PHOENIX GROUP INFORMATION SYSTEMS	01/05/17	133.50	PARKING CITATION PROGRAM
109949	11453	PORTOLA SYSTEMS, INC.	01/05/17	2,088.32	INTERNAL FIREWALL PRJ# 2017-19
109950	11412	PROSHRED SFBA	01/05/17	105.00	SHREDDING SVCS - 12/16
109951	4176	MICHAEL QUEBEC	01/05/17	525.00	RECREATION CONTRACT
109952	11369	REBECCA HIBBS	01/05/17	23.11	EXPENSE REIMBURSEMENT
109953	11375	RESIDENCE INN SAN JOSE SOUTH	01/05/17	3,879.60	ACADEMY TRAINEE HOTEL NOV 2016 - MAY 201
109954	740	ROSS RECREATION EQUIPMENT COMPANY INC	01/05/17	1,100.16	PROJECT 1138 - PARK RENOVATION
109955	11040	SABRE BACKFLOW, INC.	01/05/17	236.28	BACKFLOW PARTS & SERVICE
109956	112	WILLE ELECTRICAL SUPPLY CO INC	01/05/17	749.11	ELECTRICAL PARTS
109957	5164	SAN MATEO REGIONAL NETWORK INC SMRN.COM	01/05/17	170.00	WEB HOSTING, EMAIL FILTERING, & NETWORK
109958	11296	SIGNATURE CARPET ONE	01/05/17	998.00	SILLIMAN TILE REPLACEMENT
109959	220	SONITROL	01/05/17	1,059.00	ALARM MONITORING
109960	40	STAPLES ADVANTAGE DEPT LA	01/05/17	3,961.54	OFFICE SUPPLIES
109961	5962	STATE BAR OF CALIFORNIA	01/05/17	372.00	MEMBERSHIP FEES
109962	2778	STATE OF CALIFORNIA FRANCHISE TAX BOARD	01/05/17	440.00	PAYROLL DEDUCTION - GARNISHMENT
109963	11396	SWA SERVICES GROUP INC	01/05/17	26,573.06	JANITORIAL SERVICES DEC'16
109964	679	TARGET SPECIALTY PRODUCTS	01/05/17	338.94	PARTS & SERVICE
109965	1765	TEMPERATURE TECHNOLOGY INC	01/05/17	7,995.57	HVAC SERVICE & MATERIALS
109966	11395	TETRA TECH INC.	01/05/17	5,352.22	LOCAL HAZARD MITIGATION PLAN
109967	10318	SHANNON TODD	01/05/17	2,950.48	EXPENSE REIMBURSEMENT
109968	5623	VERIZON WIRELESS	01/05/17	418.11	SERVICE FOR IPADS
109969	10249	WASHINGTON URGENT CARE	01/05/17	180.00	VACCINATION SERVICES
109970	5050	WEST COAST ARBORISTS INC	01/05/17	20,890.50	2017 STREET TREE MAINTENANCE
109971	340	WITMER-TYSON IMPORTS	01/05/17	705.85	K9 TRAINING/SUPPLIES
Total				351,876.64	

1

Final Disbursement List. Check Date 01/09/17, Due Date 01/09/17, Discount Date 01/09/17. Computer Checks.
Bank 1001 US BANK

MICR check#	Vendor Number	Payee	Check Date	Check Amount	Description
09972	10650	EUNJOON LEE	01/09/17	13,109.00	REFUND OF MONEY - CASE#15-04316
		Total		13,109.00	

Final Disbursement List. Check Date 01/12/17, Due Date 01/23/17, Discount Date 01/23/17. Computer Checks.
 Bank 1001 US BANK

MICR Check#	Vendor Number	Payee	Check Date	Check Amount	Description
109973	332	ADAMSON POLICE PRODUCTS PROFESSIONAL POL	01/12/17	291.22	POLICE SUPPLIES
109974	332	ADAMSON POLICE PRODUCTS	01/12/17	1,706.03	POLICE TRAINEE UNIFORMS
109975	218	ALAMEDA CO LIBRARY ATTN: FINANCIAL SERVI	01/12/17	25,000.00	CITY/COUNTY AGREEMENT ADDT'L LIBRARY SER
109976	284	INFORMATION TECHNOLOGY DEPARTMENT ATTN:	01/12/17	3,187.89	AWS ACCESS FEES
109977	284	TREASURER OF ALAMEDA COUNTY	01/12/17	125.00	RADIO REPAIR/MAINT
109978	5821	ALL CITY MANAGEMENT SERVICES, INC	01/12/17	3,591.00	CROSSING GUARD SVCS 12/04-12/17/16
109979	411	AIG BENEFIT SOLUTIONS	01/12/17	690.00	EMPLOYEE LIFE INSURANCE
109980	11432	APPROVED GAS MASKS	01/12/17	2,199.98	GAS MASK FILTER REPLACEMENT APPROVAL# 20
109981	11445	ASPEN ENVIRONMENTAL GROUP	01/12/17	933.50	PROFESSIONAL SERVICES
109982	348	AT&T	01/12/17	176.73	MONTHLY TELECOM DEC'16 - LISTING
109983	11433	AUTOWISE	01/12/17	1,562.26	AUTP PARTS/SERVICE/REPAIR
109984	5122	JEREMY BECK	01/12/17	108.78	EXPENSE REIMBURSEMENT
109985	3681	MATT BREEN	01/12/17	597.68	EXPENSE REIMBURSEMENT
109986	1513	BURTON'S FIRE INC	01/12/17	105.95	FIRE ENGINE SERVICE/REPAIR
109987	6950	CALICO CENTER	01/12/17	5,000.00	CALICO FOR 2017
109988	10261	CARBONIC SERVICE	01/12/17	269.82	CO2 PURCHASES
109989	11401	CHRISTI WALLACE	01/12/17	423.50	EXPENSE RIEMBURSEMENT
109990	11413	CINDY K. HULL & ASSOCIATES FORENSIC CONS	01/12/17	1,250.00	LATENT PRINTS
109991	10060	COMCAST	01/12/17	203.96	CABLE TV
109992	2051	CRITICAL REACH INC	01/12/17	565.00	CRITICAL REACH SUPPORT
109993	10793	GEETU AHUJA	01/12/17	114.00	REFUND FOR JR. WARRIORS REGISTRATION
109994	10793	CAROL MCCARTY	01/12/17	15.00	CLASS REFUND DUE TO CANCELLATION
109995	10793	KARLA M RAMIREZ	01/12/17	300.00	RENTAL DEPOSIT REFUND
109996	10677	DAILY JOURNAL CORPORATION CALIFORNIA NEW	01/12/17	52.50	LEGAL ADS
109997	10794	DUKE DE LEON	01/12/17	60.00	VIDEO RECORDING SERVICES
109998	11081	DIVISION OF THE STATE ARCHITECT ATTN: SB	01/12/17	291.36	CA STATE CASP FEES
109999	11015	EAST BAY LAWN MOWER	01/12/17	224.45	SMALL ENGINES AND TOOLS
110000	4211	EXECUTIVE DIRECTOR EAST BAY EDA	01/12/17	7,005.74	MEMBERSHIP FY16-17
110001	11461	EMC PLANNING GROUP INC.	01/12/17	7,982.07	CONTRACTUAL SERVICES GREATER NEWPARK SPE
110002	10725	GUSTAVO ARROYO	01/12/17	1,500.00	EE COMPUTER LOAN PROGRAM
110003	11132	SEAN ERIKSEN	01/12/17	412.03	EXPENSE REIMBURSEMENT
110004	11431	EXTENDED STAY AMERICA	01/12/17	4,516.50	PATROL POST TRAINING
110005	11314	FH DAILEY CHEVROLET	01/12/17	1,211.60	GENERAL MOTORS PARTS & SERVICE
110006	1120	FORENSIC ANALYTICAL SCIENCES, INC	01/12/17	962.00	LAB TESTS
110007	10144	SHEILA HARRINGTON	01/12/17	550.78	EXPENSE REIMBURSEMENT
110008	167	HARRIS COMPUTER SYSTEMS	01/12/17	4,301.93	SELECT FINANCIALS ERP MAINTENANCE
110009	4607	CITY OF HAYWARD	01/12/17	418.08	UB SKETCH ARTIST
110010	3284	ANTHONY HECKMAN	01/12/17	267.88	EXPENSE REIMBURSEMENT
110011	11123	I PIZZA	01/12/17	543.00	PIZZAS FOR CAFE AND PARTIES
110012	263	INTELLI-TECH INTELLIGENT TECHNOLOGIES AN	01/12/17	460.00	FIRE SYSTEM INSPECTION
110013	73	THE ED JONES CO INC	01/12/17	270.33	BADGES & INSIGNIA
110014	3644	RELX INC. DBA LEXISNEXIS	01/12/17	176.00	ONLINE LEGAL RESOURCE SUBSCRIPTION
110015	11463	LESLI MAYS	01/12/17	698.87	NATIONAL CHILD PASSENGER SAFETY CERT. AD
110016	11360	MIKE DAVIS LANDSCAPE SERVICES	01/12/17	8,433.26	PARK & LANDSCAPE SERVICE
110017	11378	MNS ENGINEERS INC	01/12/17	31,370.00	ENGINEERING CONSULTANT SERVICES
110018	10947	NET TRANSCRIPTS	01/12/17	79.60	TRANSCRIPTION SVCS
110019	10918	ANKAR CYCLES, INC dba OAKLAND HARLEY-DAV	01/12/17	966.66	MOTORCYCLE PARTS AND SERVICE
110020	349	PACIFIC GAS & ELECTRIC	01/12/17	125.58	STREETLIGHTS AND TRAFFIC SIGNALS
110021	10580	PEELLE TECHNOLOGIES INC	01/12/17	3,360.00	LASERFICHE MAINTENANCE RENEWAL 02/03/17-
110022	11346	PHAN'S SMOG STATION	01/12/17	360.00	VEHICLE SMOG CHECK
110023	11234	RAY MORGAN COMPANY	01/12/17	2,916.18	COPIER LEASE AGREEMENT

Final Disbursement List. Check Date 01/12/17, Due Date 01/23/17, Discount Date 01/23/17. Computer Checks.
 Bank 1001 US BANK

MICR Check#	Vendor Number	Payee	Check Date	Check Amount	Description
110024	1282	EDDA RIVERA	01/12/17	24.00	EXPENSE REIMBURSEMENT
110025	11403	ROYSTON HANAMOTO ALLEY & ABEY DBA RHAA	01/12/17	11,439.98	NEWARK PARKS MASTER PLAN - 11/16
110026	654	SFPUC-WATER DEPARTMENT CUSTOMER SERVICE	01/12/17	3,035.70	RENT / WATER
110027	9381	SCHINDLER ELEVATOR CORPORATION	01/12/17	1,373.61	ELEVATOR REPAIR & SERVICE
110028	11296	SIGNATURE CARPET ONE	01/12/17	2,832.00	PROJECT 1097 / CITYWIDE BUILDING FLOOR C
110029	1683	S.B.R.P.S.T.C.	01/12/17	6,780.00	PATROL POST TRAINING
110030	11396	SWA SERVICES GROUP INC	01/12/17	1,380.48	JANITORIAL SERVICES
110031	11183	KRUEGER INTERNATIONAL, INC.	01/12/17	1,184.97	PATROL ANNEX WORK STATION UPGRADE PROJEC
110032	5463	MARY TEIXEIRA	01/12/17	3.24	EXPENSE REIMBURSEMENT
110033	11447	THE HITMEN TERMITE AND PEST CONTROL	01/12/17	2,539.00	TERMITE INSPECTION & CONTROL
110034	135	TURF & INDUSTRIAL EQUIPMENT CO	01/12/17	393.49	EQUIPMENT PARTS
110035	6797	US BANK CORPORATE PAYMENT	01/12/17	10,423.45	US BANK CC PAYMENT 12/22/16
110036	7517	U S FOODS INC SAN FRANCISCO	01/12/17	967.89	CAFE PURCHASES
110037	688	UNION SANITARY DISTRICT ATTENTION ACCOUN	01/12/17	443.33	SEWER SERVICES
110038	8751	PROVIDENT LIFE & ACCIDENT INSURANCE COMP	01/12/17	261.24	PAYROLL PREMIUMS - E0246926
110039	10968	UTILITY TELEPHONE	01/12/17	15,762.23	MONTHLY TELECOM DEC'16
110040	853	VALLEY OIL COMPANY DEPT# 35101	01/12/17	13,793.73	FUEL FOR VEHICLES
110041	10998	GARY M SHELDON VBS SERVICES	01/12/17	150.00	BLOOD WITHDRAWAL SVC
110042	5623	VERIZON WIRELESS	01/12/17	1,212.55	GPS TRACKERS
110043	11424	VINTAGE FLOORING LIC# 713804	01/12/17	4,959.23	PROJECT 1097 - CITYWIDE BUILDING FLOOR C
110044	11437	JOYCE WANG	01/12/17	330.56	EXPENSE REIMBURSEMENT
110045	5732	WATERPROOFING ASSOCIATES	01/12/17	4,680.00	PROJECT 983 - CITYWIDE BUILDING ROOF REP
110046	5050	WEST COAST ARBORISTS INC	01/12/17	486.00	SAFETY HAZARD TREE EVALUATION
110047	11459	YARY PHOTOGRAPHY	01/12/17	1,040.00	DEPT PHOTO REPRINTS
Total				213,430.38	

M.1 Closed session for conference with Legal Counsel pursuant to Government Code Section 54956.9(d)(2), Anticipated Litigation: One case – from Human Resources Director Abe and City Attorney Benoun.

Background/Discussion – City Attorney Benoun has requested that the City Council convene in closed session pursuant to Government Code Section 54956.9(b), Anticipated Litigation: one case.